

AMERICAN AGRICULTURIST.

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

ORANGE JUDD, A.M.,
EDITOR AND PROPRIETOR.
Office, 41 Park Row, (Times Buildings.)

ESTABLISHED IN 1842.
Published both in English and German.

\$1.00 PER ANNUM, IN ADVANCE;
SINGLE NUMBER, 10 CENTS.
For Contents, Terms, etc., see page 193.

VOLUME XXIII—No. 6.

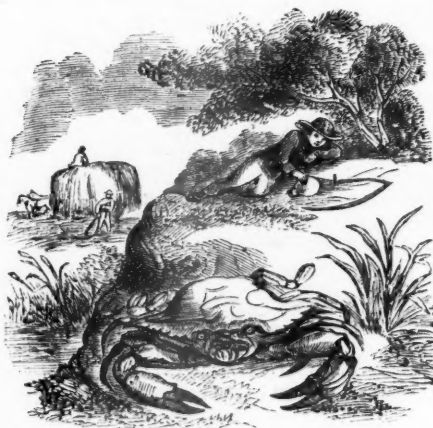
NEW-YORK, JUNE, 1864.

NEW SERIES—No. 209.

Entered according to act of Congress in the year 1863, by ORANGE JUDD, in the Clerk's Office of the District Court of the United States for the Southern District of New-York. Other Journals are invited to copy desirable articles freely, if each article be credited to *American Agriculturist*.

American Agriculturist in German.

Each number of this Journal is published in both the English and German Languages. The two Editions are similar, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs. A club may be part English, and part German.



Notes and Suggestions for the Month.

Steadily the sun climbs higher and higher up his shining path. The shortened shadows each succeeding noon mark his progress, until the full glory of the summer solstice is reached. Fays and fairies and the witches and spirits of the Brocken hold high carnival on the short midsummer night, and then the days begin to shorten and the nights to lengthen again. The sun "takes the back track" after the 21st of June, hence, appropriately, the crab which goes backward as well as forward, is the emblematic sign of this part of the Zodiac. The constellation *Cancer* is not brilliant like *Taurus* and *Gemini*, but still is distinctly marked by a quadrangle of stars with a nebulous (or cloudy) group in the centre. Our artist has taken the opportunity to teach a lesson in his way, and inserts a warning against agriculturists taking the backward road. Let us cultivate intelligence in our calling, temperance and virtue, and then agricultural progress shall know no retrograde, and shall meet with no check either in the experience of the country, or of individuals.

Work for the Farm, Barn, and Stock Yard.

We look forward to the coming season as likely to be one of severe trial to many farmers. At the West the spring was extremely backward, and this has crowded spring and summer work together most uncomfortably. The great scarcity of labor everywhere, is but to a very small extent supplied by a most unexpected im-

migration, and the very high wages demanded will lead many farmers, perhaps unwisely, to "get along" with very little hired help. Nevertheless it is likely that prices for farm produce will rule high, and that the husbandman's labor will be well rewarded. It should be the farmer's constant aim to keep well to windward, beforehand with his work, so as to allow himself plenty of leeway. Then if any thing goes wrong, if a week of rainy days comes, he will be able to weather the danger and not get set back very much. The importance of constantly stirring the soil at this season is very great. Weed seeds sprout rapidly and the young plants are tender and easily killed. After a few days growth it will be hard to destroy them, and their shade will prevent the starting of other seeds. It is much better to have weed seeds sprouted than dormant in the soil, and ready to come up just when it will be impossible to kill them, as occurs where the ground carries some sowed crops—grass or grain. Deep tillage and frequent stirring are next to thorough draining, the surest preventives against the evil effects of drouth. We have known crops of both corn and potatoes greatly benefited by running a lifting subsoil plow drawn by a pair of horses driven tandem, deeply between the rows.

Barley is sometimes sown with profit as late as the first of June, though it is seldom best.

Barns ought to be cleared out and put in order for the crops soon to occupy them. Attend early to all repairs, that damage do not accrue to crops that the proper buildings should shelter.

Barn-Yards.—Look out for the drainage of the yard; if possible collect every drop of water that falls upon it, in a good cistern, which can be pumped out so that it will never waste anything by an overflow. Begin to cart into the yard all vegetable accumulations of the garden and farm.

B-ans.—Plant on any soil not too rank from fresh manuring. (See article in last No., p. 138.)

Beets, Sugar and Mangels.—Sow as early as possible if the sowing has been so long delayed. For more convenient horse culture, place the rows 30 inches to 3 feet apart.

Buckwheat may be very profitably sowed at this season for plowing in as a green manure crop. Two crops may thus be turned under in a season. The grain sowed now will not fill well.

Butter.—June butter is commonly the best of the year. The grass is fresh and sweet; the weather is not so hot that butter making is interfered with, and the flow of milk is larger than at any other period, so that butter may ordinarily be made in larger quantities, and better. Milk should not be disturbed at all after it is set, until it is skimmed. It should be kept at a temperature not lower than 55° F., and not higher than 60°. Though, without a cool, spring dairy-room, this is seldom practicable.

The cream ought to be kept as cool as possible and thoroughly stirred every time any new cream is added. Scrupulous cleanliness, the use of tin or earthen pans scalded daily and most thoroughly, good ventilation and perfect freedom of the air from any odors of cooking, putrefaction, or any thing else, but clover blossoms, or new mown hay, churning at the lowest natural temperature, never touching the butter with the hands, working out the buttermilk very thoroughly, and salting moderately, will secure butter of an excellent quality, which if well packed will keep the year round. Scald new firkins or tubs with buttermilk, and subsequently with strong brine.

Cabbages.—At the time of setting out, dip the roots in strong brine to kill the white worms. The application also benefits the plant. Delay setting out the main crop until next month, and then if possible put them upon new ground.

Carrots may still be sowed for main crop as early as possible, or between rows of onions, to succeed them. If the onion rows are nearer than 2 feet leave every third space vacant to cure the onions in.

Cheese.—Use all means to improve the quality; visit some of the associated cheese dairies.

Cattle.—Do not over-work oxen, but feed bran or shorts if much labor is required of them. Provide shelter for beef animals at pasture, especially during storms, and give at such times extra food, if it be not given regularly. *Cows*.—It will pay to stable them nightly and feed oil-cake meal, shorts, brewers' grains, or the like, with cut hay; or use, so-called, "slops." *Calves* fattening for market may either run with the cow, or being at grass, get two or three feeds daily of skimmed milk thickened with a little bran, oil meal, oat and corn meal, etc., in judicious mixture. Take good care of calves and young stock, and keep well fed and growing.

Corn.—It is much better to plant the first week in June than a few days too early. Steep the seed until it nearly sprouts. Tar and plaster it. Blue vitriol in the water will kill smut. Keep weeds down, and stir the soil frequently.

Fodder Crops.—Corn, horse-tooth or sweet, sowed in drills or broad cast, Sugar sorghum treated in the same way, millet, Hungarian grass, etc., are all worthy of attention in case there is any danger of failure of the grass crop. For soiling or feeding green in case of drouth, either corn or sorghum are invaluable.

Grain in southern sections will be fit to harvest; cut as soon as the grain is out of the milk.

Grass.—It is better to cut grass of last summer's seeding, if it is not very stout, early, and give it a top-dressing of plaster of fine compost, than to wait until hot weather, when a drouth following, haying might do serious damage. Top-dress meadows immediately after mowing.

Haying.—See pages 169 and 174, of this number.

Hoeing.—Hand hoeing will, we fear, be greatly neglected this year, and many farmers have yet to learn how horse-hoes and cultivators may be made to take the place of the hand-hoe, however important this may be in thorough cultivation. The bayonet hoe may well be introduced into the field, especially for root culture. We find in all soils that are in any thing like good tilth, that it expedites work very much.

Insurance.—No man having less than \$100,000 a year income can as a general rule afford to insure for himself—that is, to let his property go without insurance against fire. By all means insure house, stock, and crops in barn and stack against fire, with some company whose credit is worth more than their capital, and of which there is no suspicion of unsoundness, or recklessness. Live-stock life insurance, and insurance of crops on the ground are unknown in this country.

Insects.—Cultivate intelligent observation of the habits of insects to distinguish *friends* from *foes*, and destroy the latter. Our friends are few in number, chief among them are ants, and bees, the large blue steel-colored wasp-like Ichneumon fly and others of similar shape, the Ladybird, Tiger beetles, Ground beetles, and Dragon flies, or Darning-needles. These with others, either feed upon or lay their eggs in the bodies of other insects. Never kill a spider, all kinds are very useful.

Manure making should commence in earnest, and all vegetable and animal matter not valuable for other purposes should find its way to the compost, or dung heap. Look out for dead animals.

Pastures.—Top-dressings of gypsum or bone-dust are in order any time this month, or before frost. Keep sheep in pastures on which brush or briars are encroaching, first mowing off the brush.

Peas.—Sow for seed from the 10th to the 20th of this month, burying the seed quite deep, 4 to 6 inches. Some shade is no disadvantage to the late sowed crop, if the soil be good. The attacks of the pea weevil are not continued much after early peas blossom. The crop will be light and no bugs.

Potatoes.—Frequent stirring of the soil is very beneficial, so also are top-dressing of ashes, plaster, etc., at the first or second hoeing.

Poultry.—Young chickens are of great value in the vegetable garden and fruit-yard. Confine old fowls in large quarters, feeding grass or some greens daily, not neglecting the directions heretofore given. An acquaintance ties up the feet of his hens having broods, enclosing each foot in a bag, and gives them the range of the garden. They do little or no damage by scratching, and eat many insects.

Seed Grain.—Select the best and cleanest part of the field, go through it pulling all weeds and inferior plants by hand, giving these that stand the very best chance. The point is not to select the seed from that part where the yield is greatest, but where the grain is best grown. Very remarkable improvement in grain may be secured by culling the largest, plumpest heads and sowing them by themselves year after year.

Sheep.—See article on page 175, of the present No.

Sorghum.—Cultivate like corn, thin out freely. See notes, and "Basket" for last month.

Swine.—Employ them working over the manure; keep them in good growing order by regularly feeding corn or some grain, oil cake, beef scraps, etc. Give pigs the range of the orchard.

Tanners Bark.—Peel hemlocks and oaks at this season and stack the bark so as to shed rain.

Tobacco.—Water seed-beds with weak liquid manure, push forward the preparation of the field, to be ready to transplant about the middle of the month. Select a rainy day if possible for transplanting. Protect the young plants by wet, chafed straw or short grass. See article on page 171.

Tools.—By means of improved implements, sharp, light hoes for quick work, and tools adapted

well to the purposes for which they are used, supply or lighten in some degree manual labor.

Turnips.—Rutabagas and all Swedish varieties should be sowed this month, best before the 20th, though good crops may be gained sowed any time before the middle of next month. Put the rows far apart so that the cultivating may be done as much as possible by horse power.

Weeds.—This is the most important time in the whole year to kill weeds. The seeds are starting, and frequent stirring of the soil destroys the seedlings. Perennial plants are in vigorous growth, and repeated cutting at or just below the surface kills many kinds. Even the most tenacious of life may be smothered by covering with weeds or grass.

Orchard and Nursery.

The nurseryman, although the filling of orders is over, has abundant work in caring for the remaining stock and in providing for its increase, while those who have planted orchards will find it to their interest to spare some time from other work to look after their newly set trees, keep down the weeds and cultivate them well.

Birds.—Powder and lead like other strong remedies should not be trusted in careless hands. Shoot sap suckers, and all birds of prey, but allow no indiscriminate "gunning." The more birds the fewer insects, and the better fruit crops.

Black Knot.—Cut out the limb as soon as the knot appears and burn it.

Budded Stocks.—The vigorous shoots which push from the buds are very easily broken by winds, or even by their own weight, and should be carefully tied with bass bark to the stub of the stock left for this purpose. Remove suckers which start from any part of the stock. Keep down weeds.

Evergreens.—If proper precautions are taken to keep the roots from drying, these may be transplanted. Prepare the holes beforehand and remove the tree as rapidly as possible. Select a cloudy day. Prune into shape; leave the growth near the ground.

Grafts.—Examine those inserted this spring and rub off suckers and superfluous shoots. The grafting clay or wax will sometimes need replacing.

Insects.—The same advice must be reiterated—kill all you can and ask the birds to help. Again and again we are obliged to reply to inquiries that there are no specific remedies against particular insects. Oils, alkalies, and strong soap-suds will destroy many, others can only be conquered by burning, crushing or drowning. Whenever a caterpillars' nest is discovered, do no other work before it is destroyed. Early in the morning and damp weather are the best times to find all hands in camp. Jar the plum trees daily and gather the curculios as they fall on a sheet and destroy them.

Layers.—The new growth of shrubs may be layered, bending the branches down and fixing them by means of pegs in well prepared soil.

Labels.—Look to those attached by wires and prevent danger of binding as the limb enlarges.

Manure.—Let bearing trees have a surface dressing spread to ends of roots, if not already done.

Mulch.—All newly planted trees will be benefited by it. Use litter of any kind, chips, saw-dust, etc.

Nursery-rooms.—Stir the soil, keep down weeds, remove suckers, head back such plants as need it.

Pinching.—Shoots of fruit and other trees which tend to grow too long should be stopped. Rub out shoots starting where branches are not wanted.

Seed-Beds.—Shade the young seedlings as directed in February, page 50. It is a good plan to sift fine earth over the bed of seedling evergreens so as to cover the stem up to the seed-leaves.

Thinning.—If quality is regarded rather than quantity, thin out freely, especially dwarf pears.

Weeds.—Use the horse hoe, cultivator or plow, and keep them down, the hand-hoe will be needed around trees and in the rows.

Kitchen Garden.

The returns of early vegetables already received will convince the most sceptical that a good garden "is a good thing to have in the country." Then how much better is everything fresh and crisp from the garden, than when it has been carted for miles in the wagon of the marketmen and exposed to wilt on the stalls, or at the green grocer's door. We rejoice with those who have a garden, and not the less for the thought that we have had some hand in helping to make it.

Asparagus.—Don't exhaust the bed by over-cropping, but stop about the middle of the month, clear off the weeds and let the plants grow.

Beans.—Plant dwarfs for a succession. Limas may do well even if planted now. Give the runners poles or other support.

Beets.—Sow the winter crop by the middle of the month. Hoe, weed and thin the early sorts.

Cabbages and Cauliflowers.—Sow for a late crop if not already done. Transplant from seed bed. A piece of paper, an inch wide, wrapped around the stem of each plant, at the surface of the ground, is said to keep off the cut worm. Look out for caterpillars and destroy while young. Hoe often and forward the early sorts by liquid manure.

Carrots.—Thin to six inches in the row. Hoe and keep the start of the weeds. Seed planted even as late as this will usually make a fair crop.

Celery.—Make trenches 2 feet deep, 1 foot wide and 4 feet apart, put in about 8 inches of well rotted manure in the bottom, and 6 inches of soil and spade thoroughly. When the plants are large enough, set out a foot apart, and if the weather is hot, shade a few days. For the late crop the plants may be picked out from the seed bed into another bed of good soil to make them stocky.

Corn.—Continue to plant for succession. Have a good stock for drying for winter. Hoe often.

Capsicums or Peppers.—Set in a rich, warm place.

Cucumbers.—Those started early need care or the striped bug will destroy them. A frame covered with millnet will do in the small way. Where there are many hills it is difficult to protect them, and good culture must be the main reliance to get them out of the reach of insects. Sprinkling with pepper, ashes, plaster, solutions of aloes, etc., have been recommended. Put in seeds around the hills to furnish young plants for the bugs. Plant the main crop for pickling, using plenty of seed.

Egg Plants.—These need a light soil, well enriched, and their growth should be forwarded by frequent hoeing and doses of liquid manure. Set two feet apart in three feet rows, and hill up in hoeing.

Endive.—Treat according to article on page 178.

Insects.—Kill wherever seen. If a plant becomes much infested, destroy it. Trap moths by bottles of sweetened water. Crush eggs before they hatch.

Lettuce.—Thin and transplant. Sow for succession.

Melons.—Treat as suggested in article on their culture on page 146, last month.

Onions.—Hoe, weed, and thin to 3 or 4 inches in the rows. Mulching with sawdust and watering with gas liquor have been recommended for destroying the grub, also a dressing of salt and ashes.

Turnips.—Hoe, weed and thin as soon as large enough. Sow early this month if not already done.

Peas.—Plant the main crop the first of the month. Set brush early and keep well hoed.

Potatoes.—Hoe and cultivate thoroughly. A handful of plaster to each hill will help wonderfully.

Radishes.—Continue to sow for late.

Rhubarb.—Cut the flower stalks as soon as they appear. Bottle or dry a supply for winter use.

Salsify.—Cultivate the same as carrots.

Spinach.—A succession sowing may be made. Try the New Zealand sort for summer use.

Squashes.—If the first planting has failed, renew

it. The ground for late sorts to be well manured. Dust abundantly with ashes while young. Look under the leaves for the squash-bug, kill and crush its eggs. If a plant wilts, look near the root for a grub, dig it out and cover the wound with earth.

Sweet Potatoes.—Set plants as directed on page 178.

Tomatoes.—Transplant for the late crop. Pinch back if spreading too much. See article on training in gardens on page 178.

Turnips.—Sow for second early. Thin and hoe.

Watering.—If this must be done, the evening is the best time. A free use of the hoe will usually prevent the necessity for it.

Weeds.—If there are any to be seen, the garden is too large. The same ground cannot well grow weeds and crops. If left to fight it out by themselves, the weeds will get the best of it. Do all the heavy work with horse power and it will be only sport to finish in the rows with the hand hoe.

Winter Cherry.—Set and cultivate as tomatoes.

Fruit Garden.

Blackberries and Raspberries.—Tie up the new growth to stakes or the trellis. Keep down superfluous shoots, saving only the strongest.

Currants.—By rubbing out straggling shoots much pruning may be avoided. Give the bushes frequent hoeing, and an occasional watering with slops or liquid manure will improve the size of the fruit. It often pays better to market the green fruit than to wait until it is ripe.

Gooseberries.—Give the same treatment as currants. If mildew appears try Mr. Hite's remedy: a quart of good ashes in a pailful of water as hot as the hand can bear, the mixture thrown with a syringe so as to wet both sides of the foliage.

Grapes.—The new growth whether of young or old vines, cuttings or layers, is to be kept carefully tied up. Young vines should not be allowed to overbear, one or two bunches to the shoot will be enough. Pinch laterals as directed on page 179. If layers were made as directed last month, the trench may be gradually filled. Look out for rose-bugs and caterpillars and hand-pick them.

Pears.—Shorten branches tending to make too much wood. Rub out superfluous shoots. Thin the fruit, especially the large varieties. If slugs appear, sprinkle air slaked lime upon them from a bag fastened to a pole. Dwarfs set this spring will be injured if they are allowed to bear.

Strawberries.—If it is wished to multiply a variety, let the runners go, but remove them from beds planted for fruiting. Keep clear of weeds. If the winter's mulch is not left on it will be well to cover the beds with something to keep the fruit clean. Straw run through a cutting machine answers a good purpose, but tan or saw dust may be used. If fruit is sent to market, have the boxes of the same quality at top and bottom. It is well to assort the fruit and make two qualities. If living near New-York, send specimens to our Strawberry Show.

Flower Garden and Lawn.

This is the enjoyable month in the garden, for the queen of flowers, the Rose, now holds her court there and all delight to do her honor. The enjoyment now experienced from the abundance of floral gifts, should induce us to labor out of mere gratefulness. So leaving the Rose and all her subjects to win favor by their own loveliness, we write out the more prosy details of the labor which shall keep up a succession of beauty in the garden.

Annals.—Transplant those large enough, and sow seeds. If sown as late as the first week in June, annuals will frequently do as well in the open ground as those put in earlier. The soil being thoroughly warmed they grow very rapidly.

Bulbs.—Allow the foliage to wither before taking them up. Dry in the shade and wrap in papers with labels and keep until autumn in a dry, cool place, away from mice.

Carnations.—Tie the flower stalks to stakes. Sow seeds. Propagate by layers and cuttings. Cuttings put into very pure wet sand and kept in a cool place, root slowly but quite surely.

Climbers.—Keep the perennials which need it, well tied to the trellises. Tender kinds which will need to be laid down in autumn, must not be allowed to secure themselves by intertwining with the lattice work. Screens or unsightly objects may still be covered with herbaceous climbers. Rooted plants of Cobaea and Lophospermum will grow rapidly. Sow seeds of Morning glories, Cypress-vine, etc. Sweet Pea is fine for a low climber.

Dahlias.—Those not already separated should be divided, leaving a tuber or portion of one to each, and planted. Set stakes at the same time. Allow but one shoot to grow to a root.

Evergreens.—These may be removed this month if the roots are kept covered; mulch after setting. Prune those needing it into shape. The upper branches should not over-hang the lower ones.

Frames.—All are to be put under cover and glazed and repaired at the first leisure.

Geraniums.—Plant out the bedding sorts and as they incline to grow out of shape, cut them back to a compact form.

Gladiolus.—As the flower stems appear, they will need to be secured to stakes.

Grass Edgings.—Clip with the sickle as often as the grass is long enough to cut. Root out dandelions and other coarse weeds. Keep the roots from extending into the borders and walks by use of an edging knife or very sharp spade. Trim the edges of lawns along the walks in the same way.

Gravel Walks.—Rake and roll, if necessary to keep down the weeds, use a very sharp hoe.

Hedges.—Cut young hedges back to thicken the bottom. Keep established ones in shape by clipping.

Insects.—Use whale oil soap for slugs and hand pick and destroy rose bugs and larger insects.

Keeping.—The garden whether small or large should every where bear evidence of what is called "good keeping." Weeds ought not to be seen, and old flower stalks, decayed leaves, and everything unsightly removed to the manure heap.

Lawns.—Mow as often as there is sufficient growth for the scythe to take hold of, using a very long scythe. Cut a well defined circle around trees and shrubs, and keep all within this clear of grass and weeds. If the grass makes a poor growth, give a dressing of bone dust or a sprinkling with liquid manure. Thistles, dock and all large weeds should be carefully eradicated with spade or trowel.

Mounds.—It often produces a good effect to raise a circular mound in the lawn of good soil and cover it with low bedding plants, such as Verbenas, or with Portulacacs, and other showy annuals.

Potted Plants.—Those set out in the grounds should be sheltered or they will be blown over by high winds. Water regularly as they may need it, unless the pots are plunged in the earth.

Roses.—Cut back the perpetuals as soon as they have done blooming. Shake off the rose-bugs early in the morning into a vessel of hot water. One pound of whale oil soap to 8 gallons of water is the best for slugs. In the absence of this try strong soft soap suds.

Transplanting.—The hints given on another page are to be noted. In dry weather make holes and pour in water, and after it has sunk into the earth set the plant. If very hot, shade with paper, an inverted flower pot, or a shingle.

Verbenas.—Peg down if needed. They may still be set out. They look best in masses.

Green and Hot-Houses.

These are by this time nearly emptied of their contents, all except the tropical plants being set in the ground. Display the few things that are left to the best advantage, and keep the house neat.

Camellias.—These need partial shade which may be given by a lattice-work as mentioned last month. Watch for insects, particularly the mealy bug.

Cuttings of all kinds of stock to bloom next winter, can be made in-doors where they can have proper moisture and shade.

Geraniums.—These are now in flower and will need free watering. Make cuttings.

Inarch such plants as are propagated in this way.

Potting.—As the plants increase in size give more pot room. A good supply of suitable soil and various sized pots should be always at hand. Get sods from an old pasture and stack up to decay. Save old hot-bed manure to use in composts.

Seedlings.—Plants started in the green-house from seeds are now large enough to put out.

Water.—The atmosphere of the house must be kept properly moist and care taken that the soil in small pots does not become too dry.

Cold Grapery.

Great care is required in ventilation to avoid sudden changes. The house should be opened and closed early; the time of doing this must be governed by the thermometer which may reach 85° to 90°, at mid-day. The rise from the night temperature to this should be gradual. During blossoming discontinue watering overhead. It is necessary to assist the distribution of pollen and ensure fertilization by going over the house every morning and give the bunches a shake with the finger. After the berries are set, syringe overhead to clean away the remains of the flowers. Give water freely. Leave one bunch of fruit to a spur and pinch off the end of the shoot at the third or fourth leaf beyond the bunch. The number of bunches left on the vine will depend upon its strength—with young vines it is safe to remove the fruit from each alternate spur. When of the size of peas thin the berries one half more or less according to variety. Tie up the side branches to the horizontal wires.

Apiary in June.

Prepared by M. Quinby—By Request.

When the weather through May has been favorable, the best hives will be full, and the bees ready to go into the surplus boxes. Occasionally, a box or two may be filled before clover blossoms; it is then, however, quite sure to be stained with pollen from dandelions. Those who want honey for the table or market, of the purest quality, only—of flavor and appearance—would do well not to put on boxes until these latter flowers are gone. Whenever the hive becomes full of bees, the boxes may be added without waiting for them to appear on the outside. In cold weather they will crowd together inside much longer than when very warm. Yet the inexperienced can have no better guide for this, than when the bees cluster outside. There is usually much gain in getting them to work in the boxes before they swarm. Boxes, whether of wood or glass, should not be over five inches deep. To encourage a beginning, pieces of clean white combs should be fastened in the top; if one or more is large enough to reach the bottom, it is still greater inducement. After a swarm leaves, when only a small family remains, they will often finish boxes, partly full, when nothing would induce them to begin. Should any colony entirely leave such boxes, or commence removing the honey to the hive below, the boxes should be taken off, and given to some strong swarm, that will finish them.... Any hive, failing to increase its bees by this time, should be examined. If the brood is diseased, drive out the bees to begin anew, before the numbers are reduced too much to do anything. If queenless, they are generally reduced too much by this time to wait to raise a queen. It is better, unless too far gone to recover, to give them a mature, laying queen. If one can be procured in no other way; drive out the bees of a strong colony, find the queen and introduce her to the destitute one, return the bees, and in a few days—twelve or fourteen—they will raise queens, some of which, at

this season, will be likely to lead out swarms. Should a queenless family be discovered about the time small after-swarms issue, hive one in a box and set it on the top of the queenless hive at night opening the holes; next morning, if not all in the lower hive, shake out of the box in front, they will go in, and not be likely to fight. Swarms should be hived with as little delay as convenient after they have clustered. It is of no consequence what way it is done, providing the bees are all made to enter the hive, and then kept cool. I would discourage the practice of cutting off the branches on which they alight, for the sake of having them convenient to get into the hive, because the bee-keeper at least, ought to have his trees and shrubbery of too much value to spare a branch for every swarm. When they get out of reach, use a ladder, and take a small box made of thin boards, to represent a hive that can be carried in one hand, or take a bag, with a hoop to keep the mouth open, and shake the bees in, and bring them to the ground where they will become quiet in a few minutes, if it is set up like a hive. If preferred, they may remain until near evening before being transferred to the proper hive. The movable comb hives are inconvenient to get the bees in. Probably the best way is to get them in a light box, or common hive; then take off the top board—and if the construction of the hive will allow it—divide the frames, sliding them each way from the centre, then pour the bees from the box, like so much wheat, directly into the hive; jar the box a little and nearly all will be out. The frames may be put in place, nearly, before many creep out. Put on the top board, lay the box on its side by the entrance, and the few bees that adhere, will soon join those in the hive. By sliding the top board just sufficient to expose the ends of the frames, they may be accurately adjusted without disturbing the bees. Persons intending to Italianize their bees in the common box hive, should at least understand some of their natural history. They should know that in natural swarming, the first colony that leaves, is accompanied by the old queen, that any after-swarm is attended by one or more young queens and the one left in the old stock is also a young one: That, as a rule, there are no eggs laid in the old stock, after the first swarm leaves, short of two weeks—occasionally, three; that for 24 hours or more, previous to and after a swarm leaving, piping may be distinctly heard by applying the ear close to the hive, in the morning or evening; that after all swarming is over, the piping ceases, all queens but one, are destroyed, and she in a few days commences laying eggs. Now if this queen, before laying, is taken away, it is evident that no more can be reared there, for want of material. The first operation is rearing the Italian queen; when they commence laying they are ready. The number wanted, are reared in small boxes. The process has been previously given in the *Agriculturist*. In eight days, after a swarm has issued, listen at the parent hive for the piping of the young queen—it may be heard as early as eight, or as late as fourteen days. If none is heard, look in the morning about the entrance for dead queens; if there are several, especially if some are immature, it is evidence that there will be no further swarming. It is probable, there is but one queen left, but to make it more certain, wait a day or two longer, when the whole colony is to be driven out, the queen taken, and bees returned. Two days after, the Italian queen may be introduced. If two or three swarms have issued, the piping should be listened for just the same after each. As long as it is heard, there are queens yet sealed, and further swarming may be expected, and it is useless to do any thing until they are through. Other than the swarming season will do, by driving out the bees once more. The first operation, is to drive out, find, and remove the queen, and return the bees. In from twelve to fourteen days, they will have a new queen—perhaps several. If they swarm—which they may do if honey is obtained—piping will be heard. Otherwise, the first hatched queen will destroy the others. If nothing is heard in sixteen or eighteen days, it will answer to drive out the bees again, and introduce the Italian.

Notes from the Fruit Growers' Meeting.

These meetings are continued as usual, at 2 P. M. on Thursdays. They are open to all. We extract the following from the "talks" at some of the recent ones.

E. Williams spoke in favor of the Clinton grape—had seen it preferred to Delaware.

Mr. Dodge agreed that the Clinton was a fine grape.

W. S. Carpenter left the fruit on the vines late, until touched by frost, when it was very good.

A letter was read by Solon Robinson, inquiring about raising strawberries with present high prices for labor.

Dr. Ward replied that the raising of strawberries on the old plan involved too much labor—he thought the horse and cultivator would eventually have to do the work. Manure and prepare the ground every way as for Indian corn, and set plants in rows the same distance as corn. Plow and cultivate one way, letting the plants run together in the row, dressing them out with the hoe. Cover with litter or straw in the fall, plow out or go through with cultivator the following spring, pick the crop and plow under, repeating the operation on the same ground, or elsewhere. Of course a field should be set out each year. The great labor of tillage the second year is thus avoided, a boy and horse doing all the labor of cultivation.

Solon Robinson stated that J. G. Bergen was now raising strawberries in this way. Mr. Pardee would plow under old plants and leave runners for another crop.

In regard to picking, Dr. Ward remarked that boys and girls acquire great skill by practice—his son had picked 100 quarts in a day. E. Williams said cost of picking depended on size of berries. Monmouth County growers paid their pickers \$1 to \$1.25 per 100 baskets.

Letters were read from the West announcing the destruction of most peach trees by the cold weather. It was advised to cut down young trees that were badly killed, and let them sprout from the bottom.

Inquiry was made if peach pits 2 years old would grow. Several persons stated from experience that perhaps one-half would grow the year they were planted and most of the others would come up the next season. Cracking the pits carefully would help those unopened by frost.

Mr. Blauvelt buried his pits in the fall, and plants in the spring—has tried cracking them during the winter, keeping dry, but only half came up.

Respecting unhealthy and short-lived fruit trees, Dr. Underhill was of opinion that they were forced too much. The nurserymen, to meet the call for large trees, crowded the growth of two years into one. Such trees readily became diseased. He thinks that nine-tenths of the injury to the peach trees is owing to this enormous growth.

Dr. Trimble alluded to a visit to Dr. Underhill's vineyard last season, where he saw more and better grape vines than ever before, mostly Isabellas. Saw some mildew on the Isabellas and noticed the rot appearing among the Catawbas. Very few Isabellas ripened at Newark, N. J. Whether the extensive thinning given by Dr. Underhill accounted for his full crops he could not say.

Regarding Dr. U.'s reputed success with the plum planted over water, he judged from observations then made that as many plums were stung over the water as elsewhere, and he did not give the curculio credit for an instinct which would lead it to deposit eggs only where the progeny would be safe when the fruit fell off.

Dr. Underhill replied that he was successful in growing annual crops of plums in this way, when he could not get any on upland. His idea was that the glare of the water might deter the insect from depositing eggs where the progeny would certainly be destroyed. He planted long bodied trees at an angle of 45° over a pond and the result was entirely satisfactory—had 2 bushels of Bolmar Washingtons on a tree thus planted, and none on another tree of the same sort set near by on upland—had not failed to raise a crop for 12 years. Another trial along a ditch where there was water only a part of the time was not so successful.

Dr. Trimble had no boat to examine the plums over the water but was positive he saw gum exuding which was a pretty sure sign that the curculio had been there.

Solon Robinson showed specimens of root grafted trees from B. W. Steer, of Adrian, Mich. He uses no cloth or wax, but joins them with a tongue, as figured in the January *American Agriculturist*.

Dr. Parker read a letter from Chas. Carpenter, of Kelley's Island, which stated that nearly all the vines on the Island were killed last winter.

A letter was read from Mr. Atkinson of W. Virginia on the deterioration of orchards for want of cultivation.

W. S. Carpenter—The borer is the cause of deterioration in the orchards of this section. The tree is attacked when very young, one egg being deposited when young, but as the tree increases in size, more appear. To prevent the insect from laying its eggs in the bark, the experiment had been made of piling stones about the trunk of the tree, as a defence, and with success. Mr. Carpenter had lost many trees by the

borer, and was applying this remedy. He believed the stones prevented the insect from finding the tree.

Mr. Weld—The tin-foil used in putting up tobacco, has been found a perfect preventive, when applied to the trunk so as to completely encircle it at the base. The tree should first be examined to see if any indications of borers exist.

Solon Robinson—Hot water has been used whenever the borer makes his appearance.

An inquiry was made, "How late it would do to transplant raspberry plants."

Dr. Ward—They can be reset as late as the month of June, if the plant is in a dormant condition.

Mr. Carpenter—Almost any season will do, if the leaves are removed. He had transplanted apple and pear trees as late as June. Strawberries could be transplanted just before they bloom, after the runners have started from the main roots. The strawberry should not be pruned in the Fall, as it then elongated its roots instead of pushing out runners, as in the Spring.

The influence of the stock on different varieties of grafts, in maturing the fruit, early or late, was discussed.

Mr. Carpenter—Perceived no influence of the stock on the graft in his experiments.

Dr. Ward—Had grafted different varieties on the Vicar of Winkfield; but they ripened in succession.

Mr. Judd—Strawberry plants cultivated in a greenhouse; the plants bloomed for four or five weeks, but no fruit appeared; feared they were pistillate plants, but observation proved the contrary. The windows were thrown open, and the invigorating air admitted and he now found some well set fruit. It was humorously suggested that the pistils had become fertilized with pollen admitted through the open windows.

A letter was read from J. Sheldon, of Alfred Center, N. Y., giving his experience in grafting clions from a sweet apple tree, into that of a sour apple, and vice versa. The fruit did not do so well as when the clion and stock were the same variety. A black mould covered the fruit.

Prof. Thurber instanced an experiment of grafting sweet apple clions on a sour apple tree. Some of the limbs of the stock were left, and the grafts inserted in the lower limbs. The pollen from the original limbs fertilized flowers on the grafts, and produced sour apples. When the remaining limbs were removed, sweet fruit was produced.

A letter, on the time of grafting, was read, from A. H. Mills, of Middlebury, Vermont. He stated that on May 9th grafting was going on in that section. The letter maintained that the graft should be set before the leaves appeared.

Prof. Thurber believed the time of inserting grafts could be extended further than was generally supposed, if the stock was in advance of the cutting.

Dr. Ward gave a recipe for making grafting wax, such as he uses in his own nursery: 1 part of tallow, 2 of wax, and 4 of rosin. The consistence of the wax will be affected by the weather. If too stiff, he would add tallow, if too soft, rosin. He would use the wax warm and apply it with a brush; put on in this way it was more durable, and a better protection to the graft.

Different methods were suggested for keeping the wax warm during the operation of grafting, such as surrounding the vessel of wax with hot water, or a quilt of batting.

Another recipe, presented to the meeting for making grafting wax, was to melt together 2 parts of rosin, 2 black pitch, 1, while turpentine, 1, tallow, 1, beeswax. This is Watson's recipe—it is applied melted, with a brush.

A letter from George Bush, Little Cooley, Pa., recommended the use of crude petroleum, for removing moss and killing vermin.

Prof. Thurber thought this should be published with a word of caution, as petroleum consisted in good part of those oils known as kerosene, carbon oil, etc., which had been used with injury to trees. Had seen it used in small quantities on green house shrubs to kill the mealy bug, and without injury to the plants. We need to know more of the effects of this oil before we can safely recommend it.

Mr. Dodge—What proof of injury is there from trees being set too deep?

Mr. Carpenter—Had seen elm and maple trees planted too deep. They had been set for 4 years, but were but little larger than when first transplanted. The trees were lifted and then grew more in one season than the 4 previous years.

Dr. Ward—What is the effect of throwing dirt over the roots of trees already planted? Had found in grading streets that 1 foot of earth heaped upon the roots causes death; was this because warmth and air did not reach the roots, or is injury done to the bark.

S. Robinson—Massing of earth upon the roots does not injure them—had seen no bad effects where the roots were covered deep, but the bark protected by leaving a space open around the trunk.

Mr. Carpenter—Had a tree banked up around the body 3 feet and the tree in a healthy condition. Another tree, with the roots buried, but not the bark, was decaying

S. Robinson—Had 50 maple trees destroyed by planting too low; set 50 more last year at the proper depth and they were all alive.

Solon Robinson—Alluded to the decay of young orchards in New England.

Mr. Field—The reason why young trees did not succeed like old ones, was owing to the exhaustion of the soil. Old orchards were set on virgin soil, which had not been poisoned by the excrements of other plants.

Mr. Carpenter—Some sorts had lived out their time. Of 30 N. Y. Pippins, set out seven years ago, only 1 tree was left; other sorts, very fine, were either diseased or running out. Trees were not pruned as they should be. The orchard should be pruned when young, beginning when the limbs are no larger round than the finger.

Dr. Ward—Is it advisable to trench vineyards?

Mr. Holton—The best conducted and most successful vineyards on the continent are trenched.

Mr. Carpenter—The success of the vine depends more on after culture, than on trenching.

R. S. Williams—Both may err, those who always advise trenching, and those who recommend none at all. Grape vines near a spring grow well, but do not ripen fruit. It is absurd to dig a trench 3 or 4 feet deep in good soil, but if the subsoil is a tenacious clay, subsoiling is necessary to promote capillary attraction.



Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form, for want of space elsewhere.

To Correspondents Once More.—

We cannot answer many personal inquiries, and do not like to devote time to this and pay return postage besides. Sometimes it is impossible; for instance Mr. C. H. C. writes about some point in grape culture and sends a stamp for reply. We write an answer and look for the address to put on the envelope, and all the clue he gives us is, Chester Co., Pa. There are over 90 Post Offices in that county, and we can not look over the mail list of each of these as it would take a long time, so Mr. C.'s answer instead of going to Chester Co., goes into the waste basket. This is only one of hundreds of similar cases of indefiniteness in letters received.

Asking Questions.—A letter before us asks how to make an asparagus bed. This is a sample of numerous queries which have been answered over and over again. This year the calendar has contained sufficient directions for asparagus with notes in the "Basket" and elsewhere. Will not our readers look through the Calendar and index of the current year, if they have only that, before they make queries about the culture of common things. We are willing to answer useful questions, and sometimes those we have already anticipated.

Distributing Seeds.—Some of our correspondents, when they have saved a fair stock of seeds of some particular thing, ask us to say to our subscribers that they will be glad to distribute to those who apply. We do not publish these notices, as we wish to save our readers from disappointment. Unless one has fine seeds by the pound and coarse ones by the barrel, and a half dozen people with nothing else to do but put them up, he had better not offer seeds to the readers of the *Agriculturist*. Letters will come in by tens of thousands, the person who offers will not be able to supply the hundredth part of the demand, and he will be blamed for proposing to do what is generally impossible for ordinary cultivators to accomplish. The regular subscribers number about a hundred thousand, and the readers hundreds of thousands. What one will like to get, many thousand others will also want, especially if it is offered free. One subscriber offered seeds in this way, and received over 13,000 applications for the 400 parcels he had to give.

The Agriculturist Strawberry.—

We are propagating plants as rapidly as possible, with all the more satisfaction as another year gives evidence of its great hardness. It will be hardly fair to expect much from our plants in the way of fruit this year, they have been so severely taxed in multiplying the stock. Still we hope the berry will tell a pretty good story for itself at the coming Strawberry Show.

A Secure Investment.—The 10-40 United States Loan advertised in our columns and referred to last month, is being rapidly taken up, not only by capitalists, but by private individuals who have small sums not wanted for present use. The recent glorious successes of our armies are well calculated to strengthen

confidence in the permanence of the Federal Government, if any doubts could be previously entertained. We can, without hesitation, advise all who have money to lay by permanently or for a short time, to avail themselves of the present opportunity.

Death of a Prominent Agriculturist.—

Edward G. Faile, late President of the N. Y. State Agricultural Society died recently at his residence in Westchester County. Although a merchant by profession, Mr. Faile has long been known as a most successful stock breeder and farmer. His influence was widely felt in connection with the State Agricultural Society, of which he was many years a prominent member, from the Presidency of which he retired only last February. His sterling qualities as a man and a Christian made him universally respected and beloved.

Oyster Shell Lime.—

"A. W. P." Cedar Co., Iowa. Shell lime is abundant on the sea-board, and costs from 6c. to 12c. per bushel, but it will not pay to transport it far inland. This is the best agricultural lime, but good building lime is nearly as efficient, and some cheap kinds are often more valuable on the soil than higher priced, whiter and finer qualities.

Manure for Cabbages.—

"E. S." Camden Co., N. J. If barn-yard manure can not be had, use muck and ashes on sandy soil, or ashes alone in soil rich in vegetable matter. Use some sort of liquid manure while the plants are growing. An application of salt is said to make them head; we never tried it.

Manure for Strawberries.—

Mrs. F. E. G. Stoddard, Northampton, (State not given,) says that the ashes of sea-weed applied to strawberries have produced wonderful results in flavor, size, and yield. "A good quantity" was applied, but amount not stated. Those who live near the shore will do well to repeat the experiment. Mrs. S. finds that a sprinkling every evening is better for fruit than profuse occasional waterings.

Seedling Strawberries.—

Rev. A. G. Perkins, Dakota Co., Minn. It is very common for chance seedlings to be produced from fruit dropped from the vines. Some fine varieties have originated in this way. As it is usually three years before they come into fruit, there is but little danger of a careful observer mistaking these seedlings for the original stock. Cultivation in hills and allowing only the runners needed for new plants to grow, will obviate any difficulty.

Everbearing Strawberries.—

W. O. Crittenden, Olmstead Co., Minn. We have never seen any of these worth cultivating; they bear a few berries through the season, but do not give a good picking at any one time. Unless you have something better than any now known, it is not worth propagating.

Plants for Names.—

A. B. Gage, Jasper County, Ill., and F. L. Bull, Shelby County, O., both send *Mertensia virginica*, called Lungwort or Virginian Cowslip. It is one of the prettiest native perennials of the West and should be cultivated much oftener than it is. . . H. Roe, Fairfield Co., Conn. The seed appears to be that of the true millet, *Panicum miliaceum*. . . J. N. Kanaga, Floyd Co., Ind., sends *Collinsia verna*. This is a neat little annual which appears among the early flowers of the West. *C. bicolor*, from California, is grown in gardens and this, though small, might find a place there. . . "S. E. S.", East Setauket, sends a *Pelargonium* flower which tends to become double after the manner described for the rose on page 177. . . R. D. Gray, Armstrong Co., Pa. The plant is the *Globe Amaranth*, *Gomphrena globosa*, an annual easily raised if the seeds are first scalded. It is useful in the garden and in dried bouquets.

Brooks' Writing and Toilet Case

advertised in the May number, is a most convenient travelling companion, well adapted for soldiers' use. It contains writing and sewing materials, and other small articles frequently needed, but not always easily attainable away from home. The whole is compactly enveloped in water-proof cloth. It would make a capital little present to a friend in the army.

"Agriculture of Mass."—

Another Annual Volume of the doings of the Mass. Board of Agriculture is before us—by the favor of Mr. Charles L. Flint, Secretary, than whom there are few whose contributions to agricultural literature are more justly popular and really valuable. The farmers of the "Bay State" are happy in having a Board of such liberal views, and the expense to the State of the publication and distribution of a volume of this kind annually, is an hundred fold returned if a proper use of the work is made by the farm-

ers. That Massachusetts farmers make a good use of books we all know. We take the liberty of proposing the subject of an "Agricultural Experiment Station," on the plan of those of Germany, to the consideration of this enterprising body.

N. B.—The Sunday School Book.—

Some of our friends in ordering Sunday School books for get to allow for the postage—an important item to us—and are doubtless disappointed in not receiving quite so many books as they order. Please observe the following table and remit accordingly—allowing 3 cents each for any number over 10 copies.

1 copy, 14 cents.	4 copies, 52 cents.	7 copies, 94 cents
2 copies, 28 cents.	5 copies, 66 cents.	8 copies, 1 08 cents
3 copies, 42 cents.	6 copies, 80 cents.	9 copies, 1 16 cents

Illustrated Horse Management.—

The Illustrated Horse Doctor by the same author, Edward Mayhew, member of the Royal College of Veterinary Surgeons, etc., has been received with great favor by the lovers of the horse. The diseases of the horse in this country are so similar to those with which he is afflicted in Great Britain, that for the most part that work has been found well adapted to our wants. The same may be said of the book now before us, issued by Lipincott & Co., and though it is written with especial reference to horses which enjoy the highest degree of "civilization," it contains a vast amount of knowledge which would profit even the rangers of the great plains. An admirable humaneness pervades the works of this author, a genuine love of the noble animal, and a pointed way of rebuking the revolting cruelties which many, kind-hearted men even, practise under the plea of necessity. The illustrations are from Mr. Mayhew's own pencil, and are very striking and instructive. To him who looks at the pictures alone and reads barely enough to know what they are about, the book is worth all it costs. The work is devoted not only to the management of the horse, but equally to that mismanagement which impairs the usefulness, induces disease, and shortens the lives of so many horses. Sent by mail, post-paid, for \$3 50.

Hints to Riflemen.—

This is the modest and attractive title of a neat volume, fully illustrated on the rifle and its use, by H. W. S. Cleveland. Every man who owns a rifle would do well to possess himself of this little book, for it discusses what makes a good rifle, describing the prominent ones in use, how to take care of and use the rifle, the principles of projectiles, and the various circumstances which govern the flight of balls. We have studied it with no little interest and profit. As game disappears before improved agriculture, our people are losing their skill with the rifle, and shot-gun too, to such an extent that in many districts a gun is seen and handled by the majority of the male population as a curiosity. The formation of Rifle Clubs has already commenced, and properly managed there might be thus afforded not only an agreeable pastime, but knowledge of, and skill with, a weapon upon which to a greater extent than we realize, may depend the liberties of the Republic.

The Spencer Rifle.—

We had the pleasure of examining at the Office of the *Agriculturist*, some of these remarkable pieces which were presented by the Spencer Rifle Co., of Boston, to the Metropolitan Fair. More than 20,000 of these rifles and carbines are now in use by our soldiers, and no doubt doing terrible work in the exciting days in the midst of which we go to press. This piece is so constructed that by the simple motion of a lever-guard which shuts over the trigger. It is loaded; no capping or priming is needed. It can thus be charged and fired faster than any man can take correct aim, and when the shots contained in the "magazine" which is in the breech are all fired, it can be reloaded with 7 or 9 cartridges much quicker than a common rifle can be loaded with one. Both officers and men in the army speak in enthusiastic terms of this rifle, as never failing, never getting out of order, and very accurate. The loading may be done with one hand.

The National Almanac and Annual Record for 1864.—

G. W. Childs, of Philadelphia, has published the second number of this most valuable annual. All statistics and facts relating to the country, whether in the General or State Governments, the organization and principle rules of the army, navy, postal and other departments, are given, and abstracts of public laws. Statistics of Territories of the United States and of Foreign countries, election returns and a host of other things are classified and condensed into a neat volume of 641 pages, which form the most useful work of reference of its kind in print. Sent by mail for \$1.50.

Chip Manure—Pond Mud.—

Gilbert Rogers, Crawford Co., Pa., writes that he has rotten

slabs, bark, saw-dust, etc., and also pond mud, a large part of which is leaves, and wishes to know what to do with it. All such decomposed wood goes in agricultural parlance under the name of chip manure. Compost it with lime or ashes until it all breaks down fine and dark colored, or cart it into the barn-yard and mix it with the manure, throwing it up into regular compost heaps, provided they can be kept moist, and at the same time not water-soaked. The material will be found quite valuable. As to the pond mud, get that out when the pond is drawn off, let it lie a while exposed to the air, then spreading it in layers 4 inches deep, scatter over it quite liberally lime slaked with strong brine, let it lie a month, then cut it over, re-forming the heap. If it appears fine and well decomposed after 2 or 3 months, use it next fall. It ought to be worth nearly as much as common yard manure. If ammonia is given off when the heap is opened, add a few bushels of gypsum or plaster.

Subsoil Plows—What do they Cost? etc.—“R. C. R.” Good steel subsoil plows cost \$12 to \$20, according to size and quality. Iron ones are cheaper, but not so good. Any good agricultural store-keeper ought to keep some on hand, and at any rate can furnish them at the same price that the manufacturers in the large cities East or West charge for them at retail.

Blue Grass in Iowa.—Mr. G. A. Benbowser, Madison Co., Iowa, says that this grass does finely with him, and notwithstanding the backward spring, it was 6 inches high on May 3d.

Crops in California.—The California Farmer says that the prospects of the grain crops are excellent in almost every part of that State. In many sections crops are said to be 4 to 6 weeks earlier than usual.

Oats—“the meanest Crop Raised.”—In the Basket of the April No., p. 102 we quote the opinions of some Ohio farmers against the oat—and call for more facts.—We have several communications quite to the point, but very much in favor of their culture. The vote of the farmers can not, it would seem, be unanimous in their favor. Let us hear both sides.

Italian Barley.—Our call for the experience of the readers of the *American Agriculturist* with the Nepal or beardless barley elicits the following testimony in regard to the Italian, accompanied by a sample, from E. Maurhoff, Butler Co. (State not named). “This was obtained from the Patent Office several years ago, is sowed in the beginning of May, on moderately rich ground, comes to perfection in three months, weighs fully as heavy as wheat, answers very well for any kind of batter-cakes, like buckwheat, but tastes better, and makes an excellent substitute for coffee. The grain grows very fast, the straw is soft and good for fodder, but chickens are too fond of it, and hard to be kept off, if it be once found out by them.” The grain is naked, like wheat, the head two rowed and not strongly bearded.

Is Hungarian Grass Dangerous?—“G. W. D.” Framingham, Mass. It is no new cry that there is some danger attending the use of this crop. From all we can learn the trouble is not experienced when it is cut soon after flowering, before the seed matures and the hard shell forms over it, and before the tufts of bristly hairs which surround the seeds become stiff, as they do when the seed is ripe. No case of injury has ever come under our personal observation.

Hungarian Grass.—J. S. Adolphus, Otsego, Mich., propounds to the *Agriculturist* the following questions: “Is the Hungarian grass suitable for sheep? Is it injurious to other stock? How much seed is sown per acre? When is it sown? Will it do well on a sandy soil? At what stage should it be cut for fodder?” We know no reason why sheep would not do well on Hungarian grass, though fine hay would probably be better for them. If cut just as it goes out of blossom, we do not believe it will hurt any kind of stock. It may be sown any time before the middle of July—best about the middle of June. Use half a bushel of seed, (half as much, if you want seed only). It will do tolerably on a sandy soil that is not too poor, but very well on good light loam, manured last year.

Horses Pulling at the Halter.—“Dick.” Many remedies have been proposed for curing this bad habit, but a simple and effective one is, to discard the common halter, and get a broad, strong leather strap to buckle around the neck a few inches below the ears. A horse may pull at this, but will soon give it up.

Cure for Scratches.—William C. Hart, Orange County, advises to apply kerosene oil once a day

for a few times. He says the remedy is a good one and will effect a cure in most cases. It is easily tried.

Colt weak in the Ankles.—“S. E.” Camden Co., N. J. Your colt that “trips or drops on his hind fetlock” does it from weakness probably, and good keeping with little work will very likely cure him. If you can, use him without shoes on his hind-feet; but if he must needs be shod, use light shoes and have them conform as nearly as possible to the natural tread of the foot. Don't let the horse-shoer make a pretty shoe, and rasp the hoof to match.

Nervous Horse—Cure Wanted.—A subscriber has a mare high-strung and nervous; she starts at every sharp noise “like a snap of the finger or the slightest noise of the lips,” yet is not really “skittish.” She exhibited it first after being alarmed by a pistol fired near her. We advise perseverance in the plan, already tried without success, of accustoming her to these sounds in the stable and while she is being fed and caressed.

Rutabagas for Cattle.—“T. F. Brady,” Minnesota, writes: “I have heard it said that feeding Rutabagas to cattle was injurious, because they injure the teeth so that the cattle cannot chew hay, and actually grow poor by eating Rutabagas. Now I wish to know if such is the fact?” No, it is not a fact. Rutabagas are one of the best kinds of roots for cattle feed. No roots should be fed without cleaning, for it is probable that if cattle have to chew much sand and gravel with their food, it will hurt their teeth.

To Cure Kicking Heifers.—D. J. Ellsworth writes that he pursues with entire success the following plan: “Tie a small rope loosely around the body just back of the fore legs; then take a short stick and twist the rope tight; hold one end of the stick with the right hand, to tighten the rope, and milk or handle the bag with the left. If the rope be made very tight, the cow will lie down.”

Milking a Cow with Sore Teats.—“J. W. C.” Litchfield Co., Conn., writes to the *American Agriculturist* that one of his cows while dry froze two of her teats. “At calving, when milked, the blood ran freely. It was nearly impossible for two persons to milk her, and it caused her intense suffering. At the suggestion of a neighbor we took two hen's quills, cut an oblong hole about one-fourth of an inch from the small end of each, oiled and inserted them into the teats, causing no pain whatever to the cow. The bag was emptied of milk in a short time, without pain to the cow or trouble to ourselves. After continuing the operation for some days, the result is, that the teats are fast healing; the cow is relieved from pain, and, instead of drying her up, as we probably should have been obliged to do, she is saved for milk this season. It is possible that a long continuance of milking thus would dry up the cow.”

Loss of Cattle in California.—The lower counties of California were subjected to a terrible drouth during the usually wet season there, by which pastures were dried up and thousands of cattle perished. Abel Stearns, the great stock raiser of Los Angeles lost about 12,000 head. Another man lost 5000, and others large herds of less number. They were the native wild cattle, roaming over the immense ranches, and valued mainly for their hides, say \$2 to \$5 each. If they be replaced with animals of cultivated breeds, in the end there will be a gain to the State.

A 1,600-pound Hog.—The notice of Mr. Benham's 1,355-pound hog—the stuffed skin of which is now on exhibition in our office—has drawn out several communications in regard to great hogs. One of these presents the following evidence that a much heavier hog was once killed in Burlington Co., N. J. T. S. Briggs of Evesham, writes that he has in his possession the memorandum book of Thomas Gillingham of Philadelphia, who “lived to be 90 years of age, and never had his word doubted.” In this memorandum book is the following entry:—“1832, 12th mo., 21st; Weighed a hog for Benjamin Rogers, Mansfield Township, Burlington County, N. J.—weight 1611 lbs.” Friend Briggs says moreover: “I have heard him tell about it dozens of times.” This testimony, we think, is good, and if it takes a plume from Mr. Benham's cap, he will rejoice as much as any body to know the fact.

“Chester White” Hogs.—“W. P. T.” The *Agriculturist* has never intimated that the Chester Whites were not white, nor has it stated that they breed pied or colored pigs. Our readers have been put on their guard least they might buy white pigs having the same general shape as these, but not being well-bred. There is complaint that animals bought for pure Chester Whites, breed pied offspring, showing impure blood.

Wool.—Two sheep owned by Oron Whitcomb, Ashland Co., O., sheared \$20.80 worth of wool of one year's growth, this season. The weight is not given.

Good Company for Sheep.—Alonzo Wilson, Cerro Gordo Co., Iowa, says: “Get a good muley heifer, 1 or 2 years old—white or strawberry-roan; let her wear the bell, she will give great satisfaction to the sheep, is readily seen by them, keeps the sheep from wandering, and will become very much attached to them, will greatly assist in driving the sheep over streams, etc., and will be found to be of more benefit than I can detail. An old cow does well, but will not become so much attached to the sheep. The cow or heifer should have no horns.” The idea is not new, but excellent.

Loss of Lambs.—T. P. Brown, Dakota Co., Minn., thinks that a considerable loss of lambs, particularly in cold weather, is occasioned by the teats being stopped by a little hard lump just within the point. A vigorous lamb will loosen it, but a feeble one can not. He advises to catch the ewe and by squeezing the teats, remove these lumps, which will be found in nine cases out of ten. Mr. B. considers this to cause the loss of more lambs at birth than all other causes combined.

Insects on Asters.—Stetson, Brunswick, Me. Growing them in a new and different soil is the only way we can suggest to get rid of the “lice” upon the roots. We have never been troubled in this way.

The Cut-worm a Climber.—Cyrus Olney, of Monroe Co., N. Y., states that upon visiting his garden at night with a lantern he found 4 to 6 cut-worms on each dwarf pear tree—some of them eating the top-most buds. He offers a prize to children for every dozen collected—a very certain way of getting rid of them.

More about the Gopher.—Rev. A. G. Perkins, Dakota Co., Min., says that he shot many gophers last year, and in every case but one, their pouches were full of dirt. The exceptional one had about half a gill of peas, procured from vines near by.

No Rats or Mice.—Isaacson's Phosphoric Paste has given us more than a year's freedom from these pests. It appeared to drive them off, as no dead ones were found or smelled. Several friends have found the remedy equally valuable. Has any one failed with it? With our favorable experience, we think we do the reader a favor by recommending the use of this preparation where rats and mice are troublesome. We have not yet tried Mr. Isaacson's other insect remedies advertised, and therefore know nothing of them.

To Expel Fleas from Animals.—Dr. Dadd recommends to rub a few drops of oil of pennyroyal along the animal's spine. We have used oil of wormwood for the same purpose with very good results; it may be necessary to repeat the application several times, and also to extend it to different parts of the body.

Distinguishing Italian Bees.—Hiram McClelland, Seneca Co., O. The Italian bee is longer than the common species, has a more hairy covering, and is particularly distinguished by yellow bands which surround the body. Queens, however, may possess these marks and yet not be pure breed, as the progeny of the Italian crossed with the common black bee may have all the external features of only one parent. The only sure test of queens, is in the character of the young bees; if these show no features of the common species, the purity of the mother may be relied upon.

Bees in Houses.—G. G. Macomber, Bristol Co., Mass. In large apiaries, a house, or room in some outbuilding for wintering bees is desirable. A good arrangement is described in Quinby's *Mysteries of Bee-Keeping*, noted on our Book List.

Eggs in Winter.—“W. H. M.” Norfolk Co., Mass., commenced the year with 2 two-year-old hens, 6 one-year-old, 18 spring pullets and 1 cock. They were fed 3 times daily—a quart of corn in the morning, a quart of scalded meal mixed with a little scrap cake, at noon, and a quart of corn at night. They were allowed to run, and had always before them lime, shells, dust, and fresh clean water. They laid in Jan. 353 eggs, in Feb. 452, in March (5 hens setting,) 413, in all 1,218 eggs. The smallest number in any one day was 5; the largest, 21; the average 13. Average weight, 1½ lbs. to the dozen. No doubt they had warm, comfortable quarters, though this is not specified.

Loss of Chickens.—A. B. McKeon, Bergen Co., N. J., reports that the gapes in chickens

have been very prevalent in his neighborhood, the present season. He lost about sixty chickens from this disease, although he tried the remedies proposed and said to be infallible. Investigation and definite knowledge on the cause, prevention and cure of this disorder, are yet wanted.

"Succor" for the Chickens—Gapes.

We give the following letter without attempting an amendment, holding that "sense is better nor larin." Squire Bunker must look out for his laurels: "As it is a rainy day and I can't do nothing about farm work, I thought I would sit down and write to you. I see in your March paper some people don't know how to cure Gapes in chickens, and you want to know if any one can give a positive unfailing remedy, well I will tell you how near I come to that sort of thing, I come within one of it, and I think that's near enough to make a calculation from, that is, after 20 years experience. I have raised, or my wife and me together have raised, from fifty to five hundred a year, and never had but one to die with the gapes. I have had 15 or 20 gaping of a cold wet morning as tho they had something in their throats that would choke them to death in 5 minits, and in fifteen minits more they all would be as smart as crickets. Well I'll just tell you how its done and if you chuse to tel every body els—I dont care. Well I take for 15 or 20 chickens about a soser ful of corn meal and one of cayenne pepper, that is 1 teaspoonful of the pepper, and watter enough to mix and give it to them and if it dont cure them in les than no time just let me know, and give me the particulars, that is, what kinde of chickens they air, and how you manage them, and I think I can save you and your chickens; that is if you take my advice. Now Mr. editor some of your folks may wan't to know, and you can tell them that I live a way out west a-bout the middle of Succordom and a-bout a good stones throw south of latitude 40 and a half days travil west of longitude 12, I am a Pennsylvanian by birth but a naturalised succor; I am keeping a account of my poltry this year and intend to beat them down-easters all hollow and you may just tel them so. But it has quit rained and I must be looking about out of doors.—Your friend,

A NATURALISED SUCCOR."

Cure for Gapes.—Stephen H. Feekes, writes to the *Agriculturist*. "To cure gapes in young chickens, put them in an empty flour barrel; take a piece of gunny bag or coarse cloth of any kind, and make a bag of it, large enough to hold a quart or two, fill it half full of dry ashes. Hold it in the barrel and shake it until the air in the barrel is filled with the dust. Repeat it two or three times in an hour, and when the dust is settled let them go to the old hen and if she don't thank you I will."

Scalding Borers.—Dr. Pitcher, of Hyannis, Mass., uses a syringe with a bent tube, with which he throws hot water into the holes and scalds the borers. He successfully treated 22 trees in this way.

Simple Protection for Cabbage Plants.—"B. B. D." writes to the *Agriculturist*. "Since my boyhood, I have protected young cabbage plants from worms, simply by surrounding the stems closely with small flat stones or chips on pieces of shingles. Almost or quite invariably the worm comes to the surface, near the stem it intends to attack; and if it meets an obstacle there, it fails; for it usually eats off the stem above the surface, if any where. I never saw this remedy practised by others, except at my suggestion; but I regard it as very effectual. Small stones which will fit closely enough around the plant, are often to be found on the spot."

Pumpkin Seeds for Worms.—G. W. G., New Hartford Centre, Conn. These are used by physicians to remove tape worms from the human system. Two ounces of the seeds from which the skin has been removed are beaten in a mortar with an equal weight of sugar and a half a pint of water, to form a milky fluid. This is taken at a dose, after fasting. If it does not operate in about two hours, a dose of castor oil is to be taken.

Raising Trees for Fuel.—A writer in the Wisconsin Farmer is of opinion that raising trees for fuel will ere long be a necessity in that State. During the past winter owing to deep snows a very scanty supply was taken to the cities and villages from the localities whence it can now be supplied, and prices rose one hundred per cent. As no near supply of coal exists, and the forests are rapidly disappearing, he considers the past winter a warning of what may be expected, if measures be not soon taken to procure a supply. The subject is worthy serious attention.

Fall Pippin in Northern Illinois.—"B. B. D." writes to the *American Agriculturist*: "At

one of the meetings of the Fruit Growers' Society, I heard part of a discussion on the early decay of recently planted orchards. Incidentally, it was affirmed, without qualification, that the Fall Pippin was perfectly hardy. It may be so in that and many other regions; but it is quite otherwise in Northern Illinois. I have, in the last twenty years, pretty carefully tested more than one hundred and fifty varieties of apples—by far too many—and the Fall Pippin was found among the most tender of them all. From a considerable number of trees, I never gathered a bushel. Not one good tree of this sort remains, and most are wholly dead. I speak from personal knowledge only of my own trees, and those in the same vicinity—about 20 miles northwest from Chicago."

The Winter's Work on Fruit Trees.

—We extract from our letters some notes on the destructive effects of cold at the West. In St. Joseph's Co., Mich., the peach trees are severely injured and no crop expected. "G. C.," Hamilton Co., writes: Bartlett's not a single leaf or blossom bud alive. Peach and quince branches would make good kindling wood. New Rochelle Blackberry killed to ground; Doolittle uninjured.

Tree Labels.—E. Tatnall, Jr., of the Brandywine Nurseries, Wilmington, Del., sends specimens of very neat labels. Mr. T. has a small printing press, and occupies leisure time in printing in clear type upon ordinary wooden tags the names of the fruits he expects to send out. He doubts if it would pay to have them printed, but he sends them as hints towards improvement in this direction. "Amateur" marks his trees by cutting the initial letter, or such letters as will designate the variety, with a sharp knife into the smooth bark, without removing any of it. The mark shows but little at first, but is plainer as the tree grows, and lasts many years.

Transplanting Nut-bearing Trees.

—A correspondent writes that he has success with the walnut, hickory and other trees having a long tap-root, by cutting this about a foot below the surface a year before transplanting. This causes numerous fibrous roots to be thrown out, and the tree may afterwards be removed with but little risk of injury.

To Clean Carrot Seed.—H. Knell, Jo Davies Co., Ill., answers to a question in the April No. of the *American Agriculturist*: "I wish to state that in Germany, we treated carrot seed in the following way: After the seed is gathered, it is put in an airy place to get thoroughly dry. It remains there until time can be spared in winter to pack it in bags; it is then dried in or over a baker's oven; after this it is beaten with a threshing flail for a few minutes, which not only loosens the outer skin, but also the little spines attached to the seed. Then by running through a fanning mill you get cleaner seed than can be procured by any other method."

How to Show Strawberry and other Plants in Fruit.—The neatest and best way we know of to exhibit strawberry and other plants in full fruit or flower, in a fresh, growing condition, without the least injury to the plants, is the following: Have a short section of a stove-pipe made, 6 to 12 inches long, and 8 to 20 inches in diameter. Set this over the plant, and with a billet of wood drive it into the soil, until its upper edge is even with the surface. Then dig away the soil around and below, and slip a board under. The whole plant, with soil undisturbed, can thus be lifted and carried anywhere, and whenever desired be returned to the ground with no loss of vitality or vigor, if kept watered while out. When designed for exhibition upon a table, it is well to previously fit a board into the bottom of the cylinder, with two or three screw holes around the rim. Then on lifting the plant, pare out a little of the bottom soil, slip in the board and fasten it with the screws. The size, and height of the sheet iron cylinder will depend upon the size of the plant, and the amount of root necessary to be preserved. The expense is but trifling, and the cylinder made of Russian sheet iron, and set upon a plate or dish is as neat as a flower pot.

Varieties of Asparagus.—E. Merritt, Dutchess Co., N. Y. There is abundant evidence that varieties of asparagus are not perpetuated by seed with any certainty, but that the sorts which have received distinctive names are due to peculiarities of soil and culture. Seeds of large kinds, other things being equal, will doubtless produce better plants than seeds from poor sorts.

Putty for Green Houses.—The Prairie Farmer says, that putty made with one third white lead instead of all whiting, will last at least three times as long as that of ordinary quality, which is not usually durable under the severe exposure of a green-house.

Black Knot in Plum Trees.—"J.," Ogdensburg, N. Y. The question of its origin was settled over 40 years ago when it was shown to be a fungus. The observations have been repeated since, and are given in the April *Agriculturist* of 1863. There is no doubt that insects use this soft growth in which they deposit their eggs, but it certainly is not caused in this way.

Nebraska Plums.—"A Subscriber," in Otoe Co., Nebraska, cautions us against believing all that is said about the wild plums of that State, noticed in January "Basket." He says that there are good wild plums, but that nothing is yet known of them in cultivation, and he supposes that they are praised to create a demand and thus get up a hardy-plum-tree speculation. We have given both sides of the Nebraska plum story, and await further developments.—Clons may come by mail in a tin box, with sand or in slightly dampened moss covered with oiled silk and strong paper.

Exterminating the White Daisy.

—N. Thomas, Portage Co., Ohio. Where this abounds, the only way to exterminate it is to plow up the meadow and plant some hoed crop. Pasturing with sheep will abate the nuisance in a measure. Some consider them valuable when made into hay, but we doubt it.

Cultivation of Huckleberries.

—Erastus. All the varieties would doubtless grow in Ohio. We know of no attempts to cultivate them. Here is a good field for experimenters.

Baker's Fruit Jars.—"Young House-keeper." These fruit jars have a cover made either of metal or glass, the former being preferable. A thin ring of India rubber is placed between the cover and the top of the jar, and an iron clamp is placed over projections on the sides and in contact with the top to hold it firmly in place. We know no better kind at the same price.

Sicilian Fowls.—O. H. Peck, Middlesex Co., Mass., thus describes fowls purchased by him under the above name, which he can not find mentioned in works on poultry. They have slightly feathered yellow legs, a medium sized top-knot, with a small brilliant red rose comb. He would like to know their origin.

Wind Power Saw Wanted.—Oliver Washburn, Huron Co., O., desires to find a good sawing machine driven by a wind-mill. Manufacturers of such an article, if it is made, should advertise.

Dyeing Directions Wanted.—H. Scholer, (no address,) wants some reliable receipts for domestic dyeing. In these high price times they would be very welcome. The weight of the stuff that is to be dyed, and the amount of dyeing material, and the exact method of application should be stated.

Scouring Knives.—A subscriber to the *American Agriculturist* writes that the ashes of hard coal unmixd with any from wood, are a better article than Bath-brick for scouring knives, forks, etc.

Animals in Vinegar.—"Subscriber," Kokomo, Ind. The particles which look like "very tiny white worms" are not portions of the "mother" but are really small animals which breed and find their proper home in good vinegar. They are popularly known as vinegar eels, and are called by naturalists *Anguillicula aceti*.

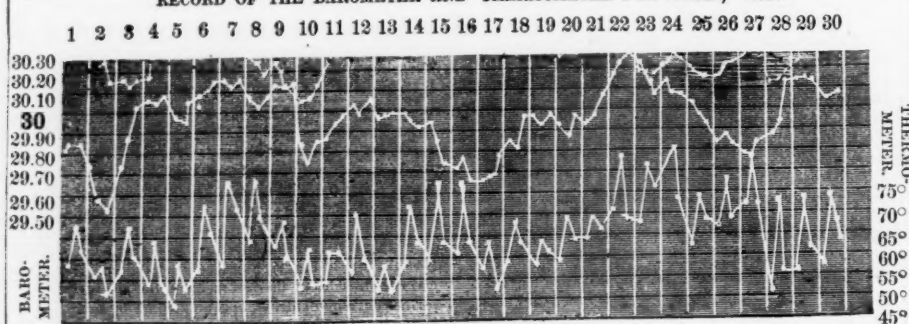
Farm Implements in the U. States.

It is estimated by J. J. Thomas, that there are now fifty millions of capital invested in farm implements, in this country. This looks as though the people had several jobs of work on hand, which they meant to do.

An Old Farm Song Wanted.—Roswell Atkins, Hartford Co., Conn., wishes to find a copy of an old song entitled "The Rolling Stone"; the chorus of it was "Oh! stick to your farming or suffer a loss; a stone that is rolling can gather no moss."

Severe on Pure Ivory.—An exchange says, maliciously: "You carry a beautiful cane—it cost \$3.50; \$1.50 extra on account of its beautiful pure Ivory head. Your wife has a costly fan, with a pure Ivory handle. In your pocket is a pure Ivory-handled penknife, very pretty and fine. On your table is a set of knives and forks, with pure Ivory handles, and a little expense they have cost for being pure Ivory. The rings in which are the reins of your costly double harness are pure Ivory. The handles of beautiful parasols are of pure Ivory—and so on with many articles useful and ornamental. But it happens that this 'pure Ivory' is manufactured from the shin bones of the dead horses of the U. S. Army."

RECORD OF THE BAROMETER AND THERMOMETER FOR APRIL, 1864



NOTES.—Quantity of Rain as follows: 1st, and 2nd, 0.48 inch; 11th, 0.91 inch; 13th, 0.26 inch; 25th and 26th, 1.63 inches. Total, 3.25 inches. There was slight rain on the 5th, 9th, 14th, 23d, 27th, 28th, and in the night of the 30th, but inappreciable. There was snow on the 13th and 14th, but very slight. Lunar halos occurred on the evenings of the 15th, 16th, 17th, and 19th, a Rainbow on the 26th, and Aurora Borealis on 27th.

May 1st, 1864.

O. W. MORRIS.

"Ten Acres Enough."—Soon after the publication of the rather severe criticism upon the author of this very interesting and instructive book, which appeared in the last *Agriculturist* (p. 134), a letter was received from him disclaiming intentional plagiarism, in making use of certain articles found "afloat" in the newspapers without credit, and in which certain points were well made, and the views he himself entertained very tellingly put. The land company's advertisement was inserted gratis, merely as an act of friendship, and it has been removed as likely to give a wrong impression in regard to the work;—and in future editions the paragraphs used as above stated, will be indicated by quotations. As to the book and the facts. The writer found it in his way to visit the author of "Ten Acres Enough," at his house, and is satisfied that while a spice of romance runs through the book, and what actually was, is curiously mingled with what might have been, the author has recorded much valuable personal experience upon a farm of the size he represents, upon which he still employs much of his time, and has worked in the results of many practical observations upon the well tilled lands of his neighbors. Such records are always valuable, and in this book they are put in a very readable form.

The Patient's and Physician's Aid.

By E. M. Hunt, M. D. Saxton of New York publishes a clever manual of 365 pages with the above title. It is not often that we commend popular medical works, but this one seems an exception to the usual run. Its directions are plainly given and set forth what can safely be done without a physician, and indicates how intelligent aid can be given to one who is called in. Price \$1.25.

Book of Fruits. Many Inquirers. Downing's Fruits and Fruit Trees of America is the standard work on the subject and is one which will probably not be superseded in a long time. It contains besides the descriptions, outlines showing the form of many of the varieties. It is a work of over 700 pages and is sent by mail for \$2.00. The best work on propagation of fruit trees, and nursery and orchard management is Barry's Fruit Garden. Price 1.50.

New York Live Stock Markets.

The weekly receipts of Cattle for the last month, ending May 10th, average 4,152. Prices have ruled higher than for any time for years. The market opened on April 12th, with an advance of 1c. per lb., Premium bullocks selling at 17c. @ 17½c. dressed weight; Medium to Prime, 14½c. @ 16½c.; Coarse oxen readily brought 14c. Average of all sales, 15c. These quotations were sustained at the last market.... **Cows.**—The weekly receipts average 164. The demand for good cows is quick, and they are held at high figures, the best cows selling at \$75 @ \$90; fair to good ones at \$45 @ \$60; common at \$35 @ \$40.... **Veal Calves.**—Choice veals bring at this date, 9c. per lb., live weight; poor, light ones, from 5c. @ 6c.... **Sheep and Lambs.**—The weekly arrivals of sheep average 9,190. The prices run high. The best wool-sheep are worth this week about 10½c. per lb., live weight; Poor lots 10½c.; Shorn sheep rate 6½c. @ 8c.; Lambs were selling at \$3 @ \$7 Pelts have declined 50 cents.... **Live Hogs.**—The weekly average receipts are 11,711. The increased arrivals of the last two weeks have depressed the market, and prices have declined. Prime corn-fed sell at 7½c. @ 7¾c.; still fed hogs, 7½c. @ 8c.

A Note from Mr. Judd.**HOSPITAL CAMPS,**

Belle Plain, Va., May 11, '64.

Please put the June *Agriculturist* to press without looking for any help from me. I have been here thirty hours, and what hours—an age concentrated into a single day. I know not how many thousands of wounded men have gathered here from the battle fields, a little distance West, South-west, and West. It has been our pleasure to receive these men as they came in to be forwarded to Washington, and relieve their thirst and hunger with coffee, stimulants, etc., to furnish clean clothing to the blood-soaked, crutches to the crippled, and say words of cheer.—Now we start for a night walk of 8 miles toward the battle field which is moving southward, where we shall find those unable to ride here. Along with us go a long line of teams, filled with stores from the U. S. Sanitary Commission, which we go to distribute.—Tell the contributors to the *Agriculturist* fund, and others, that every dollar they have sent is doing a world of good.—I can not stop to describe, but must prepare for our march. We have brought along 140 tons to distribute. O. JUDD.

(ADDITIONAL.)

Fredericksburg, Va., near Midnight,
May 11th, 1864.

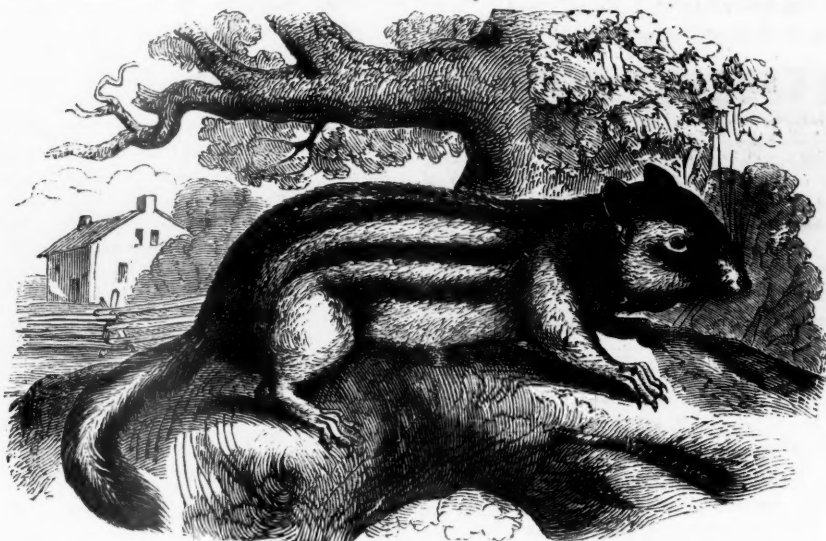
If I had previously any doubts respecting the future punishment of the wicked, those doubts would have been removed by what I have this day witnessed. What amount of torture, hanging, or death could sufficiently punish those ambitious leaders who brought about this terrible war. The scenes of suffering are utterly indescribable. In order to load our Sanitary wagons with the last possible ounce of supplies, some forty of us started on foot and made a weary march of nearly a dozen miles this P.M., to this point, part of the way in drenching rain, and a hail storm. At least half of the road was filled with wounded men on foot, and hundreds of army wagons containing four to six men each. All of these men were pierced with bullets in some part of the body. Fortunately, most of these wounds are not fatal, but they are sources of pain and suffering, more or less severe. About half of these wounded men were able to walk in from the battle field, and thence to Belle Plain, where they take steamers to Washington. The other half were carried in wagons, some of them with broken limbs, and many others pierced in through various parts. But here, in Fredericksburgh, and in the Camps in the woods, are lying terribly maimed and shattered human forms. Almost every house, church, and other building, is a hospital. But I will not dwell on this scene. One word as to what is being done by the Sanitary Commission—with the money contributed through its fairs, through the "Agriculturist Sanitary Fund," and

other channels. Part of our force remained at Belle Plain, to supply every man coming in with, first a cup of good warm coffee, with good sugar, and condensed milk (of which we brought down a ton in pint cans); then with soft bread and crackers; then with crutches where needed, cups, clean garments in the place of their own blood-soaked, dirt-soiled, habiliments, and with stimulants, delicacies, etc., etc. Oh! it was a blessed work to hand out these comforts and to have a steamboat of **140 tons!** loaded down with them, to go to, and other loads coming. I can assure every one who contributed a dollar, or a dime even, that the things purchased with the money are adding greatly to the comfort of our faint, weary, wounded sons and brothers. I wish every one could participate in the blessed work of giving these things directly into their hands. How universal was the kindly feeling. Said one to me—as I offered him a cup of coffee (cooked in the large kettles hung on a pole in the woods, over a brush fire): "I am dry and hungry, having walked 10 miles without food or drink, but yonder are soldiers in those wagons worse than me, go help them first," and what he said almost every one else said. There was no selfishness any where shown. God bless the noble men.... Here we have brought in addition to the above, farina, canned meats and fruits, etc., and after a little sleep we shall begin our labors. The cannon's boom, and the rattle of small arms through the day, at a little distance south of us, and the rattle of long lines of ambulances arriving, indicate that the work of carnage goes on.... This is the longest and hardest day's work I have ever done—and the most grateful one—but I am scarcely weary. I go to sleep now, wet, but wrapped in a blanket on the floor—only because my judgment tells me it is essential. I have not put off my garments since last Saturday, and do not expect to for days to come.

O. J.

Which is the Best Mower?

Do we know? Of course we think we do—but may we not be wrong? We beg the readers of the *American Agriculturist* to consider what the effect would be, if we were to tell what mower, or reaper, or horse fork, or hay cutter, or horse power or plow we really think the best—of course supporting the opinion by facts and reasons. We should not only run counter to the convictions of a hundred of respectable parties and their agents all over the country, each of whom thinks his own, or his favorite machine best—but we should cause a demand for the machines recommended, which the makers could not begin to supply. For even now they have more than they can do. We should prevent many of our readers getting any machine at all, perhaps, because they would hope to get the best, and in this they would probably fail. In addition to all this, we should lose credit with multitudes of our readers, because a great many of them use very good machines, which they think are best—and each has some peculiarity in which it is perhaps superior to most or all others. So all those with whom we did not agree would think we really did not know which was the best machine. So, as it would only be productive of harm if the opinions of the *Agriculturist* were expressed, we are content to advise our readers to investigate for themselves and act up to the light they have. The editors cannot even "privately" express their opinion or give their advice about these matters, as constantly besought to do.



The Ground Squirrel or Chipmonk.
(*Tamias striatus*.)

In the March *Agriculturist* we gave an engraving of the true gopher, and now present one of an animal in some parts of the West incorrectly called gopher, but more generally known as the Chipmonk, Chipmuck, and Chipping squirrel, shortened to Chippy. These names are evidently derived from the peculiar note of the animal, which sounds like "chip." It is found in most parts of the United States, though far South and West it is replaced by similar, though different species. The one under consideration has a body about six inches long, and a tail from three to four inches in length. It has capacious cheek pouches which open into its mouth and extend back for some distance. Five black stripes and two yellowish ones running lengthwise of the back, are among its characteristic markings. The hinder parts of the animal are brownish orange, and the under surface white. The sprightliness of the animal and the activity with which it eludes pursuit are well known to all who have observed it. It makes a burrow two or three feet below the surface, usually having long galleries leading to it. Here it accumulates supplies and passes the winter in families of several individuals. Some naturalists describe the Chipmonk as not being injurious to the farmer, but repeated observations show that this is a mistake. Lieut. J. R. Williams, of Venango Co., Pa. from whose excellent sketch the above cut was mainly engraved, writes that the specimen from which he made the drawing had three hundred and seventy eight grains of buckwheat in its cheek pouches. Lieut. W. says: "I have shot at different times three other specimens with their pouches full or partly so. One had two hundred and thirty three, and another three hundred grains of buckwheat. I opened a burrow which contained nearly half a bushel of buckwheat and corn, and one hundred and two walnuts. Some shocks of corn standing near had eighty ears completely stripped of their kernels." These figures show that when these animals are numerous they are capable of doing serious damage to the agriculturist and that they should be kept in subjection. They are readily trapped and may be caught in a common rat-trap, or destroyed by grain poisoned with strychnine.

A GOOD MAN'S WISH.—I freely confess to you that I would wish, when I am laid down in

the grave, to have some one in his manhood stand over me and say: "There lies one who was a real friend to me, and privately warned me of the dangers of the young; no one knew it, but he aided me in the time of need, and I owe what I am to him;" or else to have some widow, with choking utterance, telling her children, "There is your friend and mine."—A noble wish this.

A Handy "Pair of Bars."

Some weeks since a gentleman called and asked permission to lay upon the show table of the *American Agriculturist* the model of a new style of farm gate or pair of bars. No name was left with the article, but it appears to be so simple and convenient that we have had it engraved. The construction must be perfectly evident from the engraving. Three or four light



GATE BARS.

bars of some tough wood, say ash, are inserted into holes in light strong posts, and secured by pins passing through both posts and rails. Through one, which we call the "hinge-post," the ends of the rails barely pass—through the other, the "latch-post," they protrude a foot or more. The hinge-post is secured in position close to one of the gate- or bar-posts, the lower end resting upon a stone having a socket drilled in it, (or through it, in case water is likely to stand in it,) to receive the end of the post, and the upper end being reduced in size and inserted in a hole in the projecting cap which is nailed upon the stationary post. It must be obvious that the latch end of the gate may be raised or lowered through an arc of several feet. Every bar shuts like a latch into the enlarged and opened bar-hole. When the gate is opened, of course it is carried round as far as it goes, for it does

not swing at all, but the latch-post rests on the ground, and might indeed be conveniently placed upon a roller, if the gate be very heavy. When closed, a pin is inserted above one of the bars so as to prevent cows lifting and opening the gate. The advantages this style of bars possess are, that they can be opened and shut as quickly and nearly as easily as most farm gates; there is no sagging of the gate post, for no weight comes upon it, and the affair is easily and cheaply made wherever tough poles can be had. It is applicable wherever bars are placed which have to be frequently taken down, or where a gate is desirable, but is deemed too expensive because it would be so seldom used.

Labors in the Hay Field.

Every year changes the character of our labors in the hay field. Still the majority of farmers follow very nearly the old customs, and mow before the dew is off, or after it begins to fall, for several reasons. The severe labor of mowing is less fatiguing if done in the cool part of the day; during the heat of the day the hands are needed in curing, or hauling the hay; the labor is more easily performed when the grass is softened by the dew. These reasons are sufficient to settle the question of the time of day when mowing shall be done, with most farmers, and it is immaterial whether the grass be cut mornings or evenings. In fact during rainy or moist weather as much grass may be "got down" as can be taken care of when it clears, and it may lie in the swath some days without damage, if the weather continues wet.

Various kinds of grass mature sufficiently to cut at successive periods on land of the same quality. The crop may be diminished by too early cutting, and its quality hurt by cutting late. Grass ought to be cut when the greater part of it has attained its full size, and is well in blossom. Where many kinds grow together it requires no little experience to judge well, exactly when to put in the scythe. Grass cut ripe, is not only more tough and woody, and in danger of drying so as to be brittle, and waste when handled, but the hay is not so sweet or nutritious.—When cut with the scythe, the grass is left in swaths, which hold most of the dew so

that a very little sun dries the ground. Guided by the dryness of the ground, the swaths are generally spread very soon after cutting, when this is done after 7 or 8 o'clock in the morning. It is much better, in our experience, to wait until the ground is not only dry but warm, before spreading. It is as important to know when to stop "curing" hay, or rather when to stop sunning it, as to know when to begin to cut. Hay cures better in the cock than it does in the sun. The juices of the grass if dried slowly become inspissated, that is, thick or gummy, without undergoing any perceptible change except a loss of water. If after the drying has commenced the grass becomes wet, a change takes place very soon, and this is seen in its bleaching if exposed, or heating if covered. This condition of inspissation, or gumminess of the juices, is attained much more easily

in grass cut before it is ripe than afterward, and the liability to such hay of heating or damaging by either rain or lying in close heaps is less. While the grass is still fresh, it will bear the hot sun and wilt rapidly, but after it has parted with most of its water it ought to be dried more slowly. This is effected in cocks which lie up loose, so as to permit a free circulation of air, and if hay-caps be used, the curing process goes on during the night or even during rainy days. It may be that the heaps do not really dry much after the heat of the sun is out of them, nights and rainy days, but the moisture in the greenest locks distributes itself through the rest of the hay and the whole mass becomes evenly cured. Hay caps ought not to cover more than the upper third of the cock—otherwise the ventilation is interfered with. If made of good unbleached cotton, a yard and a quarter square, they will afford sufficient protection.

In bright weather hay ought never to be spread thin or stirred much on the second day, but after getting heated through both by the sun and the action of the warmed ground upon which the cocks are opened, it should be thrown together in loose heaps to finish, and as soon as a lock wrung in the hands exhibits no moisture, and it has a good, sweet, hay smell, it may be considered cured enough to put up in cocks as large as can conveniently be made, capped and left thus one or several days to "sweat" before getting into the barn.—This we think is the surest way to get sweet green hay. Yet hay may often be cut and made in a single day, and housed before night, which if well salted in the mow will be good and sweet. It is more important to cure clover in cocks, than any other kind.

The mowing machine makes great changes in the labor, but not in the principles of hay making. 1st. The grass is not cut until the dew is off. 2d. It lies spread as thin as it stood, and needs little, if any, stirring—if any, turning with a fork, following the track of the machine backward, is most convenient. After three or four hours' sunning, the horse-rake will gather it into windrows, so that all that is cut before noon may be in cocks by 5 o'clock—before the dew begins to fall. If capped, it will endure a long siege of rainy weather. A few hours' exposure to the sun and air fits it for cocking up to sweat as before stated. This system dispenses with the "hay-tedder" or hay-stirring machine. Hay-loaders, though somewhat before the public, have not been sufficiently tested. Unloading horse-forks of sundry patterns all save much hard work, asthmatic torture and sweltering up under the ridge pole. There is a plan also for lifting the entire load at once—which, however, seems of doubtful utility. These contrivances for dumping in large masses of hay make the old hay knife convenient in getting it out again. Large mows ought never to be made without ventilating passages running perpendicularly through them once in 10 to 15 feet. A few 2-inch auger holes being made within a circle of 12 inches in diameter in the floor, a grain bag filled with hay is set upon them, and as the mow rises the hay is trampled hard around the bag and it is gradually drawn up.—The above principles applicable to securing the hay crop in the best condition, with some slight modifications answer for everything else grown to cure for dry fodder.

WHAT BECOMES OF THE NICKELS.—According to the annual report of the "U. S. Mint and its Branches," up to June, 1863, there had been coined 164,011,000 nickel cents, 47,845,000 of them

during the previous year. When the specie paying time arrives, nickels will be plenty.

Sweet-Scented Vernal Grass.

The Prairie Farmer in giving a mixture of grass seeds found to answer well for pasture in New England, recommends that for the West, the Vernal-grass, among others, should be stricken out. We say don't do it. Haying time at the West is deprived of half its enjoyment, simply by the absence of this most fragrant grass. In New England the hay-field can be scented afar off, and it is this grass which gives the "sweet and wholesome odor" to the "harvest of the new mown hay." What if it is not very valuable as a pasture grass? Let us put in a little just for the poetry of the thing, if nothing more. But it is valuable. It gives flavor to the butter, and never crowds out more valuable grasses—but fills in between them if there is room for it to grow. Its seeds maintain their vitality so long in the soil that where it has once been introduced it springs up whenever sparseness of vegetation gives it a chance.

For the American Agriculturist.

Dry Fodder.

Too many farmers are in the habit of looking upon hay as the only dry fodder; for my own part I set a very great if not equal value upon corn fodder, well cured. I cut at the roots as soon as the kernel glazes, bind in small bundles, and when it is dry, house it if possible. Corn sowed for fodder, either broadcast or in drills, I cut when fairly out of blossom. At this time the stalks are not so sweet, but they are less woody than subsequently. If possible, we arrange to have our corn fodder sowed in a long strip, say two rods wide near a fence, so that when it is cut, it can be set up against the fence to dry. We have tried sugar cane (sorghum) in the same way, and like it much, but can express no decided preference. Some years ago I obtained some seed of what was called "Egyptian millet," and though you may say this is no name at all, for so many things bear it, yet it is the only one I could ever learn. The plant grew 6 to 8 feet high in good soil, sending up a multitude of suckers. The spikes of flowers appeared very late in the season, and I was never able to ripen seed. These spikes were like the heads of the cat-tail flag, but pointed and longer, the seeds being enclosed in a mass of short bristly hairs. It was very leafy, and the stalks not tough and woody like the sorghum. This was the most valuable fodder crop I ever planted, but since the war I have been unable to get seed, as it came from the South. Perhaps some readers of the *American Agriculturist* will be able to give information about it. The crop was treated in all respects like corn or sorghum sowed in drills.

Some of my neighbors sow peas for dry fodder, threshing them indeed sometimes, but often feeding the dried haulm, peas and all. The mildew which often covers the pea vines does no injury to the hay, but the mold which forms if the straw heats in curing, or gets wet after drying, renders it unfit for horses, for which, otherwise, it is excellent fodder. In this respect, however, pea straw does not essentially differ from any other dry fodder. Any of the kinds of fodder I have mentioned, may be sowed the first week in June. Peas however, ought really to be put somewhat earlier into the ground, but sowed thick and deep they will do well.

Millet I think may be sowed later than any other thing for a dry fodder crop. In ordinary seasons a fair crop of hay may be obtained, sowed as late as the 25th of July. It may thus be used as a second crop to advantage, following early potatoes, peas, or grain. The tax upon the soil or the manure in it is not great, for when sowed so late, it is cut soon after it blossoms, and before the seed forms much. Of late years I have not used millet largely, but when my hay crop was likely to be short, I tried Hungarian grass, treating it in the same way as I would millet (of which it is a variety), and have been well satisfied with results. HAY-SEED.

A Crop of Roots.

At no distant day a crop of roots upon every farm where live stock are wintered, will be deemed indispensable. Every year increases the number of those who cultivate roots extensively, and find it profitable. There are two convincing reasons why roots should become a staple production: First, animals thrive better in winter upon a mixed diet; second, more food per acre can be obtained with them, than with any other crop. The natural food of cattle is succulent. They can live and thrive on dry hay and grain, but they will turn greedily from these to an occasional feed of beets, carrots, or turnips, and the natural taste of animals is the best guide in the selection of their food. It is true that fifty bushels of corn raised on an acre of ground will give more flesh than four times the same weight of roots; but with fair culture twelve hundred bushels of mangel-wurzels can be taken from an acre, or the nutrient equivalent of this amount in other roots, as sugar beets, carrots, or swedish turnips.

There are other minor advantages in root culture, which should be taken into account when estimating its profits. They draw but lightly upon the soil, and thus fill an excellent place in a course of cultivation on lands which have been too severely taxed. They also leave the ground clean and in the best condition for any following crop; and besides they give profitable employment at a season of the year when there need not be a great press of other labor.

Among root crops most valuable for stock we place carrots and parsnips; sugar beets stand next, mangel-wurzels and ruta-baga or Swedish turnips follow close, and when the season has advanced too far for these, English turnips will supply the place. These, particularly quick growing white turnips are better left until July.

Whichever sort is taken, the soil should be made deep and mellow. An excellent practice is to plow down to the depth of the soil (say 5 to 7 inches,) then follow with the subsoiler. A dressing of bone dust or superphosphate of lime harrowed in, will pay well; or well rotted yard manure lightly covered will not come amiss. Plowing at this season will destroy the early crop of weeds, which will add their substance to enriching the soil. About four pounds of carrot or six of beet seed per acre will be needed. Sow in drills thirty inches apart for mangels, sugar beets, or ruta bagas, and two feet for carrots. The work will be greatly facilitated by the use of a good implement for the purpose. Hoe as early as the rows can be plainly seen. There are seed sowers in the market which will make this much easier than when done in the old-fashioned way. At the first hoeing thin carrots or white turnips to six inches, and beets, etc., to one foot apart in the rows. After the first hoeing and thinning, the further culture of

weeding and keeping the ground loose can be almost wholly done by horse power implements.

The Tobacco Field.

It is to be presumed that whoever intends to plant tobacco this year, first prepared his seed bed as soon as the ground was in fit condition, and that by the first of June the tardy seeds will have come up and covered the bed with their soft little roundish leaves, lying so close to the earth that the warmth of the soil prevents their being injured by the frosts. A seed bed at this season usually presents a very uneven appearance, some of the plants having greatly the start of the others; and a late frost not unfrequently nips the larger plants while the little ones escape because nearer the surface.

The ground also was thoroughly prepared early in May or at about the same that corn land was plowed, having received, well spread, 8 or 10 cords of good manure, turned at least 8 inches under. During the month of May it may have been necessary to drag the field once or twice to destroy the weeds, but at any rate at about the first of June, or as soon as corn and potatoes are planted, it will be time to plow again and prepare the land for the crop. If the tobacco planter thinks it desirable to still further enrich the soil—which is best unless it is in very good heart, warm, rich and mellow—it may now be done in one of several ways. A dressing of 2 to 4 cords of fine compost, hog or sheep dung, or any fine manure, may be spread from the tail of the cart or wagon, and plowed in. Wood ashes may be sowed on alone, or mixed with gypsum (plaster). Superphosphate of lime (home-made), or any of the compounds found in market under the name of superphosphate, may be used also, as may guano, castor pomace, poultry house manure, etc. Spread or sow evenly, plow in and harrow. If the supply of manure is not quite so large as is desirable, or if the soil be heavy, or not so warm and light as would be preferred, it is often best to plow and harrow, first taking care not materially to disturb the manure turned under at the first plowing, and it may be worth while to roll the land so as to break the lumps. Such manure as is at hand may then be put in, in drills 3 feet apart, and covered by the hand hoe. The hills or places where the plants are to be set out, may be prepared at the same time, 2½ feet apart, by mingling the manure with the earth with a few strokes, and then compacting the soil a little by a blow with the flat of the hoe. Thus the moisture will be better retained.

The ground should thus be finished by the first week in June—at furthest before the 15th. The plants may be set out as soon as a sufficient number are large enough. The common rule is, when the largest leaf will reach across the palm of the hand, or, has a width of two, or a length of three inches. The plants are treated in transplanting much like any others: well watered some hours before moving from the seed bed; lifted with the least possible injury to the fibrous roots, (much soil can not easily be moved upon the roots.) The plants, which are handled by closing the leaves together in the fingers, are laid in hand baskets, and distributed to the planters not much faster than they can be set out, unless the air is very moist or rainy. The soil ought not to be so wet as to be soggy, but transplanting is best done after a rain has moistened the soil, and when continued moist and cloudy weather is looked for. A plant

is laid at each hill; the planter takes it in the left hand, holding it as before stated, without soiling the leaves, and with the right hand makes the hole, not packing the soil. This may be done by using a carving knife, or a thin blade of wood, a trowel, or his fingers. The hole should be so deep that the root need not be bent, yet not so deep that the entire hole may not be easily and surely filled, when the earth is closed about the roots. This should be done by inserting the knife or blade into the ground near the hole and closing it up, then pressing the soil at a little distance around the plant firmly downward, and at the same time toward the roots. Care and deliberation, that every thing be done well, pays by saving labor in re-planting. If the ground be moderately moist, no watering is necessary, but should the sun come out or the day be clear, the young plants should be immediately covered either with short fresh grass, or better with straw or hay chopped up 1½ to 2 inches long, and thoroughly wetted. Should any plants fail, their places must be immediately supplied, that they may grow uniform.

The cut worm must be very closely watched, or on some land a great proportion of the plants will be sacrificed. It may usually be found as close to the surface as the ground is moist, very near the scene of its depredations. It is said the worm prefers corn to tobacco, and so if corn be sown over the field in time to have a growth of 3 or 4 inches at tobacco planting time, the worms will take it instead of the tobacco. It of course would be best to watch daily for some time before and after the planting, in order to kill as many worms as possible. Should any readers of the *American Agriculturist* try this plan, we hope they will report results.

Our pamphlet on "Tobacco Culture," costing only 25 cents, contains a great deal of very valuable information, and will be of use to every cultivator whether he be experienced or not.

The Hoe and How to Use it.

No implement upon the farm will be more useful than the hoe, during the present month. Much can be done with the cultivator, and wherever the crop and the nature of the ground will admit of it, horse labor should be substituted for hand labor. In many places however the presence of stones or other obstructions, and rows of growing plants standing near together, require the use of this old-fashioned implement. Much labor can be saved by having the hoe of proper construction. It should be made of good steel properly tempered, that the edge may neither turn nor break, and not be too heavy to be handled with facility. Any one who has attempted to work with the weighty, cumbersome contrivance commonly used upon southern plantations, will prize the sharp light implement of northern manufacture. The handle should be just large enough to grasp readily, and inserted into the blade at a convenient angle for working, or so that it may be easily used for cutting weeds near the surface, and for drawing earth around a hill. It should always be kept bright, and to do this, care must be taken to wipe it clean and dry after working in wet soil.

Every one knows the importance of using the hoe to keep weeds in subjection, but in too many cases this knowledge is not made practical. Other things being equal, clean culture will give at the least twenty per cent better returns than when weeds are left to draw the nourishment which should go to the crop; with corn this would make a difference of eight to ten bushels per

acre—enough to pay well for several hoeings. Let this fact stimulate the neglectful to keep the hoe busy during this weedy month. Another less obvious but equally important benefit conferred by frequent use of the hoe, is keeping the surface of the ground loose. This is needed for growing plants either in wet or dry weather. In the former case, the surplus moisture evaporates more rapidly; in the latter, the moisture from below is attracted upward, and also the warm atmosphere being allowed to penetrate the cooler soil, deposits the vapor contained in it. If culture be needed after the roots have extended over most of the ground, the hoe should be used very lightly so as not to disturb them, or more harm than good may be done.

Manure Spreader.

Mr. E. G. Storms of Montgomery Co., N. Y., describes a manure spreader which he finds very effective, and which he wishes us to record for the readers of the *American Agriculturist* before somebody patents the idea. His directions for making and using it are as follows:

Take a two-inch hard wood plank 8 feet long by 8 inches wide, and along the center bore a row of two-inch holes, 10 or 12 inches apart. Into these insert branches of trees, of proper size, allowing the brush to extend 6 or 8 feet from the plank. [Rather short—but perhaps if longer the plank would bear too lightly on the ground.—Ed.] Fasten the ends of a chain near the ends of the plank and hitch the horse or horses to the middle of the chain. A long shallow box may be fastened on top of the Brush drag, to carry off loose stones, or for the driver to ride on if necessary. If the manure is not in too large piles, [small piles and near together—Ed.], it will not require spreading by hand. It should be drawn in continuous parallel lines and the machine driven across the rows of heaps. It seems almost impossible that a contrivance so simple should accomplish the work so effectually. The lumps of manure are generally "pushed" along several rods, leaving a fine, evenly distributed coat on the whole surface.

The Use of Oxen in Horse Powers.

Practical men of our acquaintance prefer to use an ox instead of a horse in the common stationary horse-powers, which work by means of an endless belt of wooden blocks on an inclined plane. It is said to be easier to break an ox than a horse to work steady; that his weight and naturally moderate gait adapt him to this work. The horse is more nervous and spirited, likely constantly to vary his pace and making a great deal harder work of it than is necessary. There should be considerable caution used in introducing the ox to his novel position and initiating him into the mysteries of "travelling all day in a peck measure," and going, but not getting along. The thing to be particularly guarded against is his attempting to jump out. The head yoke described in April *Agriculturist* would find a convenient application in this case, but a half yoke and bow, or a breast collar would do well. The labor is not severe if continued for a moderate time; but it is cruel to work horses day after day in these treadmills.

A LIE is the handle which fits all sins.

EDITORS should be able to live cheaply, for they very often get bored (board) for nothing.

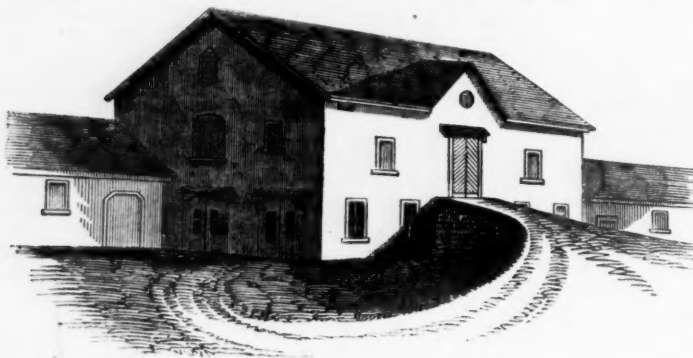


Fig. 1.—ELEVATION, OR PERSPECTIVE VIEW OF NORTHERN AND EASTERN SIDES.

An Excellent Barn Plan.

The accompanying plans and elevations are from a barn just erecting at New Castle, Westchester Co., N. Y., by Drs. Reisig and Hexamer. The plan was thoroughly studied during the winter—the size determined, each floor planned, and each room and door located. Having been consulted repeatedly, we have watched the completion of the plan and the progress of the building with interest, and think we can not better serve the interests of the readers of the *American Agriculturist*, than by explaining it in detail.

The main part of the barn is 60x40 feet, 3 stories high, and on each side is a wing 25 feet wide and about 100 feet long. The barn-yard is about 260 feet long, and at each end connected with the wings, are open sheds, the south one being used for compost and manure. **Fig. 1**, is a perspective elevation, showing the northern side, and eastern end of the main building. The approach (D) to the great doors is over the ice-house (I, in the plans.) **Fig. 3**, is the shute through which the ice is put in. **Fig. 2**, is the elevation of the southern side toward the barn-yard, with large doors to afford

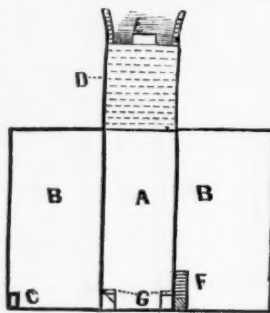


Fig. 3.—HAY AND GRAIN FLOOR.

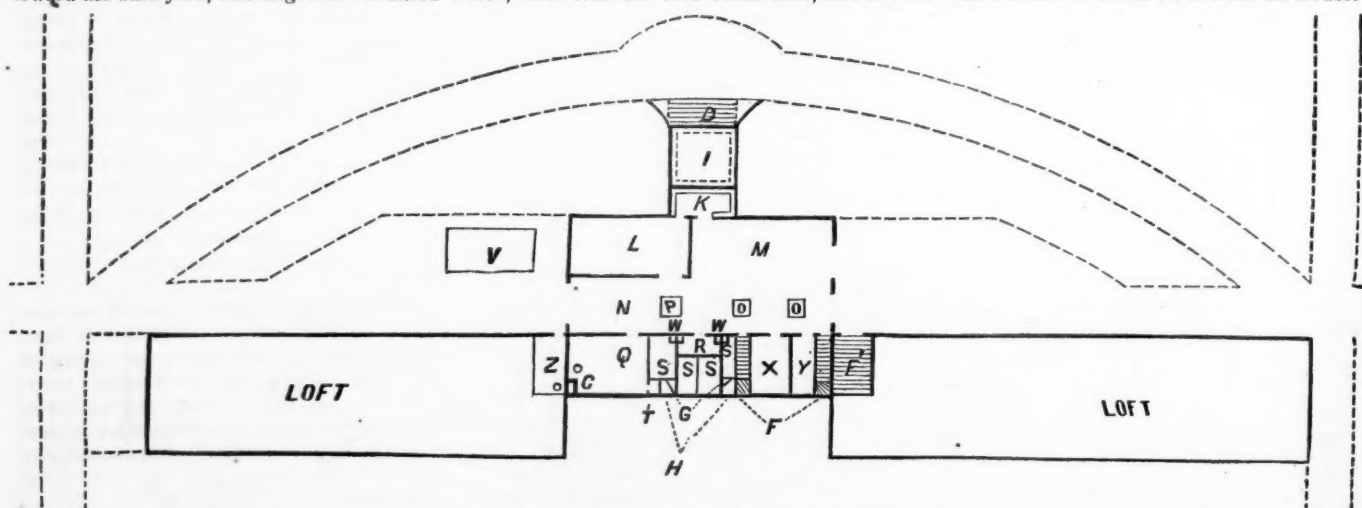


Fig. 4.—PLAN OF SECOND OR MIDDLE FLOOR, THE LOFTS EXTENDING OVER THE SHEDS SEEN IN PART IN FIG. 1 AND FIG. 2.

easy access to the root, fruit, and cider cellars.

Fig. 3, shows the hay-floor and bays—the threshing floor (A) being 15 feet wide, and the

know exactly how much of each the men use.

A work-shop (Q) is provided, 18x12ft., in which work benches and vices, wood, iron and

plumbing tools will be kept and used. In one corner the chimney, C, rises from the cook-room beneath, and a stove, the pipe of which enters it, is indicated by a circle near the chimney, and in the opposite corner there is a closet 4 feet square. At the near end of the cattle wing, Z marks the herdsman's room, entered directly from out of doors, but communicating with the stable floor by a trap-door, and steps not seen in fig. 4, but indicated in fig. 5. On the right of the feed room, and conveniently accessible from all parts of the building is the tool room, (X) where all small implements have their place. Near this room the stairs (F) go to the upper floor. Y is the harness and saddle room, where the better class of harness, etc., is kept; that used for common work is hung up in the stable, or under the horse stairs (F'). The stairs adjoining the harness room descend to the stable floor. The long dotted lines indicate the roadways, which are not fenced, but underdrained and well made, so as to be hard at all seasons.

Fig. 5, is a plan of the stable floor and cellars, yard, manure pit, etc. The fruit and cider

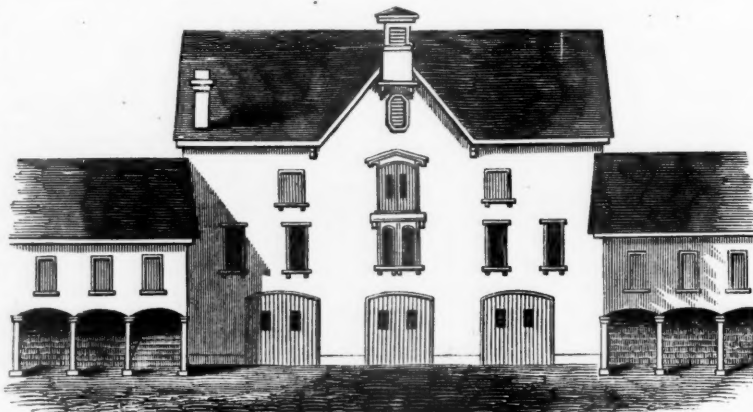


Fig. 2.—ELEVATION OF SOUTHERN SIDE.

cellar (A) is entered through the root cellar (B). This room is 25 feet square, lighted by a sash in the partition. Opening out of it is a cool cellar (D) 12 by 6 ft., for preserving grafts and cuttings, hanging a side of beef, or any similar purpose. E is a room 60 by 13 feet in which the feed is prepared for the stock of all kinds. The hay shutes (H) from the upper floor discharge here, and as there are two, different kinds of fodder can be thrown down without the trouble

boxes beneath them, and the fodder troughs (K) also, are upon castors, and may easily be moved any where. M, is the boiler, and standing near it, indicated by a small o, is the penstock and water trough. Another hydrant and trough stand near the pond in the yard. The feed boxes where the fodder is prepared, may be wheeled the entire length of each wing in

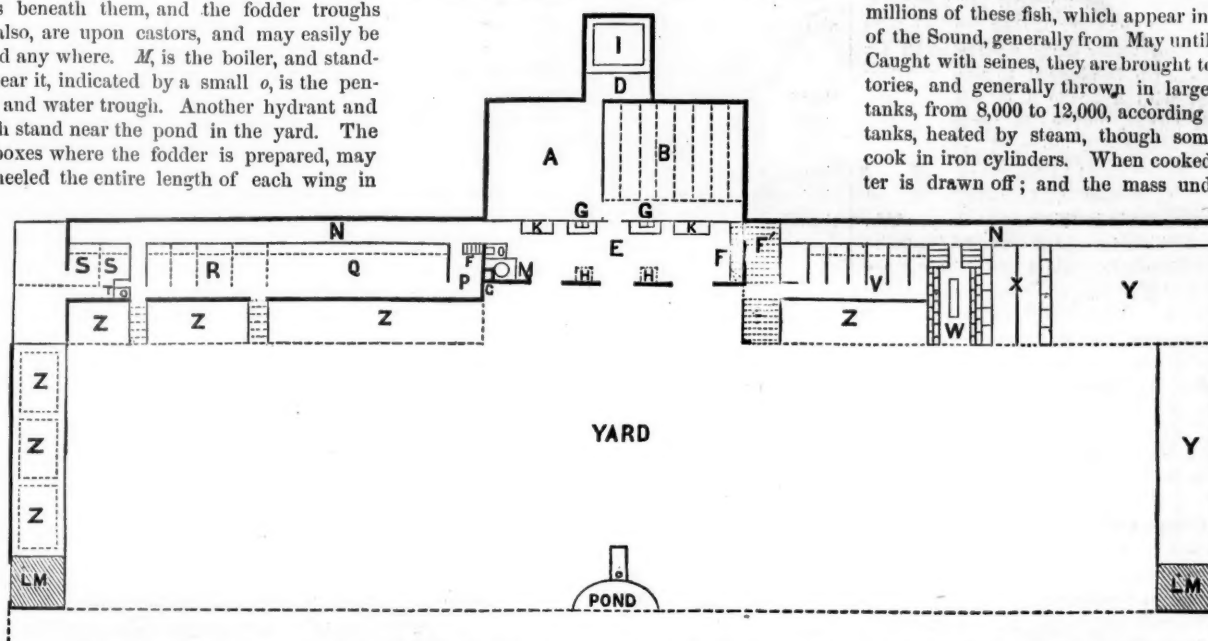


Fig. 5.—PLAN OF LOWER OR STABLE FLOOR, CELLARS, AND THE YARD, MANURE PIT, ETC., ON THE SOUTH SIDE OF THE BARN.

the 5½ foot passage way (N). In the left hand wing, Q, indicates the cow stable, 12x40 ft. R, stables for oxen and calf pens, 12x27 ft. The hog pens (S, S), each 8x10 ft. and communicating with open yards each 12 ft. square, are close by the manure and compost sheds. Z, is a privy.

In the opposite wing are the horse stables (V, 13x32 ft.) and loose box. Beyond these, and thoroughly separated from the stable by a tight partition, is the hen-house, (W), 12 by 21 feet. The plan though on a very small scale, shows the construction. The front is glass; on each side are rows of nest boxes; in the rear are the roosting ladders, and in the middle a dry pit to contain ashes, etc., 3 feet wide, and so deep that the hens can throw nothing out. Next the hen-house are the apartments for ducks and geese, designated by X, which applies to both. Beyond (Y, Y), are sheds for carts, plows, etc., or which may indeed very conveniently be used for young cattle or sheep, or for foddering cows in the yard. In the passage way (N), shutters are placed at convenient places, so that green fodder may easily be thrown down to the stock from carts passing along the roadway, on a level with the second floor. These stables are therefore adapted to soiling. The space in the rear of the stalls, (Z, Z, Z), is a manure pit, into which the dung and litter is daily thrown, when the stables are cleared out. The three Z's enclosed in dotted lines show the places for compost or manure heaps, situated under a shed, and at different levels so that liquid manure pumped up and carried over them will drain off. The letters, LM, in the corners of the yard, indicate liquid manure tanks, each of which takes the drainage of half the yard, the highest part of the yard being a line from the barn to the water trough at the pond. These tanks are located at points where the manure may be conveniently drawn off into water carts, or by hose directly upon the fields lying on a lower level.—The small building marked V, in fig. 4, is a corn crib, 12 by 20 feet, on the ground.—One of the most important characteristics of this plan is that it is adaptable to farms of almost any size. For a small farm the main building would suffice without the wings. The fruit and root cellars being made smaller, room would be afforded for the cattle and horses, where the cook room, etc., are above provided for. In order to accommo-

date a larger number of animals all that is necessary is to extend the wings, even carrying them across the ends of the yard where the open sheds Y and Z, are represented. This would at most only involve the erection of open sheds for manure, etc., in the centre of the yard. It has been a study to save steps, to have things so arranged that each man can attend to his own business without being interfered with, and the whole easily "under the eye of the master."

Fish Manure—Fish Guano.

One of the means we have of getting back from the sea the fertility which flows into it from every hill-side and meadow, from every country ditch and city sewer, is to use the fish for manure. The time will never come when so little fish food will flow into the sea from our rivers and harbors, that fish will not multiply prodigiously along our coasts. Though it is true that in many parts of Europe where there used to be good fishing in the streams, the sportsmen complain that since the farmers have taken to thorough-draining, and scrupulously saving the wastes of the farm, the good fish have nearly if not quite all disappeared.

First among the fish used principally for manure in this country, is the *Alosa menhaden*—commonly called Bony fish, Menhaden, White fish, Moss Bunker. From time immemorial they have been taken in very large quantities along our coast, carted directly upon the fields, spread broadcast and plowed in, dropped in or on the hill for corn, composted in various ways, and subsequently applied in quantities of 7,000 to 15,000 to the acre. More recently the price of oil has made it profitable to take them for this product, and hundreds of factories have sprung up on the shore of New-Jersey, in many of the bays and inlets of the Sound, and further East. The fish decay very soon after coming from the water, hence these fish-oil establishments load the breeze with odors not of "Araby the blest" to the great disturbance of many a city man who has located his country seat near the sea.

A correspondent from Southold, L. I., communicates to the *American Agriculturist*, the following facts on the subject of this industry.

"Some 8 or 10 Factories on the east end of Long Island, work up yearly between 30 and 40

millions of these fish, which appear in the Bays of the Sound, generally from May until October. Caught with seines, they are brought to the Factories, and generally thrown in large wooden tanks, from 8,000 to 12,000, according to size of tanks, heated by steam, though some parties cook in iron cylinders. When cooked, the water is drawn off; and the mass undergoes a

powerful hydraulic pressure. After extracting all the oil possible, the residue is partly dried and run through a picker, a revolving cylinder with iron teeth cutting it fine, then wheeled to a sheltered building in large heaps. Some years ago sulphuric acid was sprinkled over, but farmers objecting to it, the practice was discontinued. My opinion is that the acid retained much of the ammonia which otherwise, in the heating process which the fish goes through, evaporates. Farmers speak highly of this fish fertilizer. The most valuable is turned over 3 or 4 times to evaporate the moisture, giving the buyer the most of the fertilizing substance; it is used in drills for corn, etc., or sown broadcast for wheat, oats, etc. It looks but reasonable that this fish fertilizer should be very similar to Peruvian guano, the latter being the deposit of seabirds living mostly if not entirely on fish. The manure contains a great deal of phosphate of lime and much ammonia, either ready formed or remaining in the meaty part."

The nets are sometimes drawn upon the sand and large quantities of it adhere to the fish, and subsequently constitute a notable proportion of the manure. Recently, however, deep-water fishing is practised, the fishermen going out in small vessels. The habits of the fish allow nets to be drawn around the "schools" and gradually contracted until the lower edge of the deep net can be drawn on board, and the fish thus secured are scooped out of the net into the vessels. In this way they are perfectly clean.

Home-made Poudrette.

"William," whose profitable use of the contents of the privy vault is noticed in the April "Basket," sends at our request, an account of his process. The vault of his privy is a water-tight cistern holding 500 gallons, and fitted with a lid for removing the contents. Besides the usual accumulations, the chamber slops are emptied here—amounting from a family of 3 to about 350 gallons a year. To manufacture the poudrette he makes a layer of soil shaped slightly concave like a saucer; this is covered with a layer of night soil, on which is placed a stratum of charcoal, and over this a layer of forest leaves. Then another layer of earth, followed by night soil, etc., as before, and so on until the contents

of the cistern are used up. All the absorbing materials are made as dry as they can be by sun heat, and kept under cover until wanted for use. This heap is allowed to remain a few days, when with a spade it is cut up and thoroughly mixed, and again thrown into a heap. The absorbents are used in such proportion as to give about 13 gallons of night-soil to the barrel of poudrette. Our correspondent values manure made in this way at \$2 per bbl., the price at which he sold a part of his stock; and values his whole product from 350 gallons of night soil at \$63 50. Poudrette made in this way, he says, has been used along side of that sold in the market, and was found to produce better results.—We have given several plans for utilizing night soil, any of which will answer, and we can not too often or too strongly impress upon our readers the importance of saving all solid and liquid manures, human or other.

Corn as Food for Stock.

Indian corn is not well adapted to feed all kinds of stock at every stage of growth. The changes of season and variation of climate are such that domestic animals like men thrive best upon a variety of food, changed according to circumstances. Corn contains, in large quantities, those principles which when taken into the animal economy produce fat and generate heat; hence for fattening animals, and maintaining animal heat during winter, it excels all other grain. It is heavy and hearty food, and when fed in large quantities requires strong digestive powers. To make it the chief food of young and growing animals, which require a diet rich in bone- and muscle-forming principles, is poor economy, unless they are fed for market. English and Scotch farmers understand this fact well, and they feed large quantities of oats peas and beans to promote growth and strength. Corn makes poultry fat and plump, but they do not lay so well as when fed partly upon oats, barley, rye, wheat and buckwheat. My experience has again and again proved that high corn feeding is too hearty and stimulating for cattle. Oxen can be forced to perform much labor and cows will yield a richer and larger quantity of milk upon a generous supply of corn meal, but it eventually affects their health. For fattening cattle however, this practice is advisable. To keep cattle in a condition of sound health through their natural length of life, corn meal should be fed sparingly.

The horse can bear, and requires, richer food than the ox when at labor, yet corn is not the grain under all circumstances. His days will be shortened by continuous high feeding upon it. The evil effects of such a course are seen in a dull eye, dry skin and rough coat. Its tendency is to heat roadsters, particularly in warm weather when they are likely to be overheated by exercise, and it gives a tendency to lay on fat, when a diet that goes to simply repair the waste of muscle is needed. When giving horses cut feed was first and so strongly recommended, the practice was generally adopted. But stage owners and others found their horses failing quicker upon it, than upon oats. Now, oats and old hay fed dry with carrots only are advised for horses subjected to fast driving. The bad effects of meal are not so apparent upon draught horses, whose motions are always slow. Still, for this class, oats given whole or ground with corn, or some similar feed is much better. "Fine Feed," bran or shorts, counteract the bad effect of meal in part, and are advantage-

ously used with cut feed; using a mixture of about one part bran to three or four of meal.

In those states where hay is a leading crop, and a variety of grains are raised, there is not that inducement to feed out corn exclusively, that exists at the South and West, where corn is the great staple. It is difficult to see why Southern planters keep their horses almost entirely upon a grain so heating and hearty, when the climate naturally requires a diet of an opposite nature. Owners of horses living in cities, and who buy all their keeping, are too often influenced by the fact that corn is the cheapest grain in market. True economy in feeding stock lies in giving them that food best adapted to their wants. It is not intended by the foregoing to ignore the value of corn; but it seems to receive among our grains a higher value than it deserves, except as a fat producing diet. If a few years of scarcity and high prices lead to an inquiry into its merits, and in finding good or better substitutes, nothing will be lost in the end.

N. S. T., Essex Co., Mass.

A Word from an Old Sheep Raiser.

The present prices obtained for wool, and which are likely to continue for a number of years, have induced many farmers to invest in sheep, and no doubt a great many inexperienced farmers will "have the wool pulled over their eyes," as the saying is, and in a few years abandon the whole thing, jumping into the next current of high prices in something else, forgetting that "*Care is the mother of Luck.*" The great art in raising a flock of sheep is to secure for them sound healthy constitutions; and next to this it is important to get the largest amount of wool on a given surface. To accomplish these ends, care is required in selecting your breeding ewes. A judicious, fine-wool farmer will reject all long-legged and bare-faced ewes, selecting only short-legged, wool-to-the-toes, and wooly-faced ewes, well built and "heavy set." A ewe can not be relied upon as a kind and good suckler before the age of three years; at the age of four years she may be considered in her prime, and her strong and vigorous constitution is imparted to her progeny. The reason why we have so many ill-shaped, and unproductive flocks through our entire country is the hap-hazard, careless manner of too many of our farmers in selecting their breeding ewes; they have a certain number of ewes, yearlings, two-year-olds, three, four, and indeed often up to twelve and fifteen-year-old ewes. The season arrives for "turning in," and without any thought about his business, the careless farmer expects to raise a flock of healthy, hearty lambs, simply because he is following in the way his father went before him. UPPER ST. CLAIR.

Stirring Hay—Conflicting Views.

American farmers at the present time are inclined to look favorably upon any plan for lessening or dispensing with manual labor upon the farm. Hay can be made and housed the same day by letting the grass get pretty ripe, cutting it early and "keeping it in the air"—that is, frequently turning it—all the hottest part of the day. Hay cut before it is ripe and containing little or no clover, may be cured in the same way, and if well salted in the mow may remain sweet—but the practice we think can not be habitually followed with the best results. The *Hay-tedding machine*, is a very efficient help to farmers who practice the system of

often turning and thoroughly drying the hay in the sun. The only hay tedder that we know of which has been successfully used in this country is the one Mr. Herring advertises. The operation of this machine is very simple and complete, it tosses up the hay by means of spring forks which move like grasshopper's legs—and it falls lightly and evenly spread. Every lock is shaken out in a twinkling, and every individual straw is exposed to the air. Hay thus worked dries with extraordinary rapidity, and is quickly brought into that condition which a majority of farmers consider most desirable. It is the general testimony of those who have used it that on any good hay-day they can, before dew-fall, get in all the grass cut before 10 or 11 A.M.

Admitting this to be true, the question is still an open one whether the hay made thus quickly is worth as much as that cured in the cock. Perfect hay is green and fragrant, soft and pliable, the clover even should remain green and hold its leaves which should be soft and not brittle; there should be not a particle of mold or dustiness, neither should the hay be excessively salted; one barrel to 20 tons being all sufficient. In another article we have given a system whereby such hay may be uniformly secured.

It is not a matter of speculation which hay is best; but it is a fact that hay cured in the cock is much the best, especially clover or hay in which there is a notable quantity of clover. Still the question of profit, involving weather-risk, labor, quality of hay, should be thoroughly considered by every farmer. A dollar uniformly saved in making a ton of hay becomes at once a very important item of farm profit.

Late Planting of Corn.

At the present writing there is every promise of favorable weather for getting in the corn crop early; many will doubtless be in too great haste, and by planting too soon have to replant, but others will through press of work and scarcity of help find June upon them, and some corn not yet in the ground. It is not too late for the quick growing sorts like the R. I. Premium and the Improved King Philip to mature; indeed they frequently give a better crop than that planted early in May. It is well where this is done, to give the seed a rapid start by manuring in the hill with guano, superphosphate of lime or some other stimulating manure. Care must be taken to keep such compounds from contact with the seed, otherwise it may be injured or destroyed. It will pay well to go through fields already planted and replace all missing hills. *

Breeding Horses.

The tempting market which is at present open for all kinds of horse flesh has led we fear to the sale off the farms, of mares valuable for breeding, the loss of which will be seriously felt by and by. European governments who from experience of numerous wars and the necessity of always being able to obtain horses for war purposes at short notice, take care that those which, being in use by the military, are withdrawn from productive labor, are not mares. These are left upon the farms. We are satisfied that no kinds of stock will pay to raise better than horses at present prices, and we have many inquiries on the subject.

The horse breeder should be guided by the fundamental principle that *like produces like*. That is, good colts will come of good, sound, healthy mares and sires. The judgment of a

small farmer or of any one who has not a large stud of breeding horses is first exercised in the selection of mares from which to breed. In very large establishments the selections of stallions, suitable to the purposes for which the horses are bred, is of the first importance. Constitutional unsoundness is apt to be hereditary. Broken winded mares seldom breed, and when they do, the foals show a predisposition to the same difficulty. Of course no animal suffering from chronic disease should be allowed to breed. There are many defects which are the results of accidents, and these do not interfere necessarily with a mare being a good breeder. Spavin, ring-bone and all enlargements and diseases of the bones are considered constitutional. Curb, bad feet, and "break downs," though less likely to recur in the progeny, would lead a careful breeder to reject a mare at once. Roaring is also liable to be reproduced; and defective sight and hearing unless from obviously accidental causes, ought to cause mares or stallions to be rejected as breeding animals.

The mare therefore should be sound, deep in girth, "roomy," without being "pot-bellied," with a wide deep pelvis, the back straight and strong, the ribs set well out, giving the barrel strength and rotundity, and the tail ought not to be set too high, which though handsome is apt to be associated with a contracted pelvis. Further than this, the more style and beauty she has, the better. "Spirit and quality from the sire; size, beauty and constitution from the dam," is the horse breeder's motto, and it rests upon established physiological principles.

The Stallion ought to be of less size than the mare, of good temper, courageous, willing, docile, sound, well knit as to muscles and sinews, of quick and sound perceptive faculties, (hearing, sight and smell particularly). He should have a bony head, clear eyes, and broad open nostrils, a straight short back and straight rump, high withers with a broad chest and loins. The shoulders should be sloping, the barrel round and well ribbed back. The legs muscular to the hocks and knees, but bony, flat, hard and smooth below. When possible we advise breeding from a thoroughbred stallion, and otherwise from those showing the most 'blood.' As a general rule it will be found true that the sire especially influences the nervous energy, perceptive faculties, endurance, spirit, muscular and motive power, and the coat of the progeny—in short those parts most intimately connected with the brain, spinal-marrow and nerves of sensation and motion;—while the influence of the dam upon the constitution, vital force, the digestive functions, and all those parts governed chiefly by the involuntary nerves, or located near them, is so frequently observed that she should be selected with this distinctly in view.

A Word for the Blue Jay.

The Blue Jay is usually considered a mischievous bird, but Mr. Geo. B. Cone, Washington Co., N. Y., thinks it more than pays for its board. He has noticed these birds for nine years, and finds that although they steal a little corn through the opening of the crib, they busy themselves in picking off the eggs of insects which are glued to the twigs of fruit trees. They stay around the orchard all winter, and he is quite willing to give the half bushel or so of corn they eat, in return for services they render in removing the clusters of eggs. Mr. C. says that during the nine years that he has allowed the Jays to be unmolested, there has been scarcely a caterpillar's nest seen in his orchard,

while the trees of his neighbors have been infested and nearly ruined. He considers the Jay one of the farmers' best friends. Mr. Cone says that the crow is a great enemy to the jay, and is always on the lookout for a chance to destroy its eggs and young.

Care of Sheep in June.

After settled warm weather when the water is warm and cold storms of wind and rain are no longer to be feared, but not before, the careful flock master makes preparations for washing and shearing his flock. The views of the *Agriculturist* in regard to the evils of washing sheep were expressed in our last issue. Sheep well cared for and coming through the winter in good heart, will bear shearing quite early, and a determined stand taken by sheep owners not to submit to a deduction of one-third on good clean unwashed wools, will bring manufacturers, and speculators too, to fair terms. There is a great deal in putting up wool well to attract the eye of the buyer. He expects the farmer to roll his fleeces so that only the best part will be seen, and trusts his own acuteness of sight, smell and handling to discover fraud, dirty tags, dung, etc.; and buyers will generally do it too, and then farewell any hope for a high price for that lot of wool.

Whoever shears many fleeces, should have a fleece press. This consists of a strong box about 4 feet long and 12 inches wide, inside measure. The width may be decreased sometimes to advantage if the fleeces run small, by putting in a false side of inch board on one side or both. One end of the box is movable, the other fixed, and both consist of three perpendicular pieces, strongly braced on the outside, and set a quarter of an inch apart. The movable end is upon a foot piece to which the braces are attached, and which slides under cleats upon each side. This end is moved up toward the other by means of a strap which lies upon the bottom of the box, passing under the stationary end, and round a strong axle or drum, which is turned by a crank. It is drawn back by another strap, the crank being turned the other way. The fleeces are folded in the usual way—laid outside up, the sides folded in, edges to meet in the middle; the ends folded in to meet in the middle; then the tips and scraps of wool are laid in and the fleece is folded again lengthwise. Strings are placed in the press, lying in the slots in the ends. The fleece is then laid carefully in and pressed into a square mass and tied. The use of cotton twine in tying, hurts the sale, for shreds of cotton mingled with the wool may damage the color of some fabrics.

Some lambs ought to run with the flock for two or three weeks at least after shearing. The ticks will all or almost all leave the old sheep and go upon the lambs. Then the lambs should be dipped in a strong decoction of tobacco, soaking every part of the fleece. Randall recommends the English practice of using arsenic water. "3 lbs. of White Arsenic pulverized are dissolved in 6 gallons of boiling water, and 40 gallons of cold water are added." The fleeces of the lambs are wrung out as dry as possible after dipping, while they lie upon a dripping board, which is made of slats near together and supported above a tight inclined table which allows the liquid to flow back into the dipping box. A flock may thus with comparative ease be cleared of ticks. Precisely the same operation is a cure for scab, but more thorough rubbing in of the liquid into the affected parts is desirable.

Pigs—What to Do with Them.

Over a large portion of the West, the pigs, those that are left of them, have had a very hard time. The country was bare of corn, pigs starved to death or were killed to prevent starvation by thousands, and grass was very late in starting. Where there is now good grazing for the herds of swine they will do very well, and on the open prairie great numbers of them may be herded by one or two men with dogs to assist them. There are articles of food long overlooked at the West which in many localities may be very profitably used. Beef scraps, which are compressed in such hard cakes that there is no decomposition, if broken up fine or soaked and boiled, form a very nutritious article of food. The same is true of almost all animal waste which does not readily putrify. Hogs do very well turned upon grain fields after they have begun to grow well in the spring. A rye field will support 6 to 12 head per acre according to size, from the first of May to the middle of August, with very little of any thing else. When it is possible to feed pigs grain in small quantities daily during the spring and summer so as to keep them growing and in prime order, it is surprising to see how they will outstrip others not so fed when corn glazes, so that general feeding begins.

Pigs confined upon the manure and compost heaps, or in small yards for the purpose of making manure, of course ought not to be "tamed" or "rung." The amount of weeds, soda, muck and litter of all kinds that they will convert into manure of first rate quality, may be stated within bounds at 5 cords per shoat of not less than 4 months old in March, provided it be under cover, and the raw material be judiciously supplied during the season.

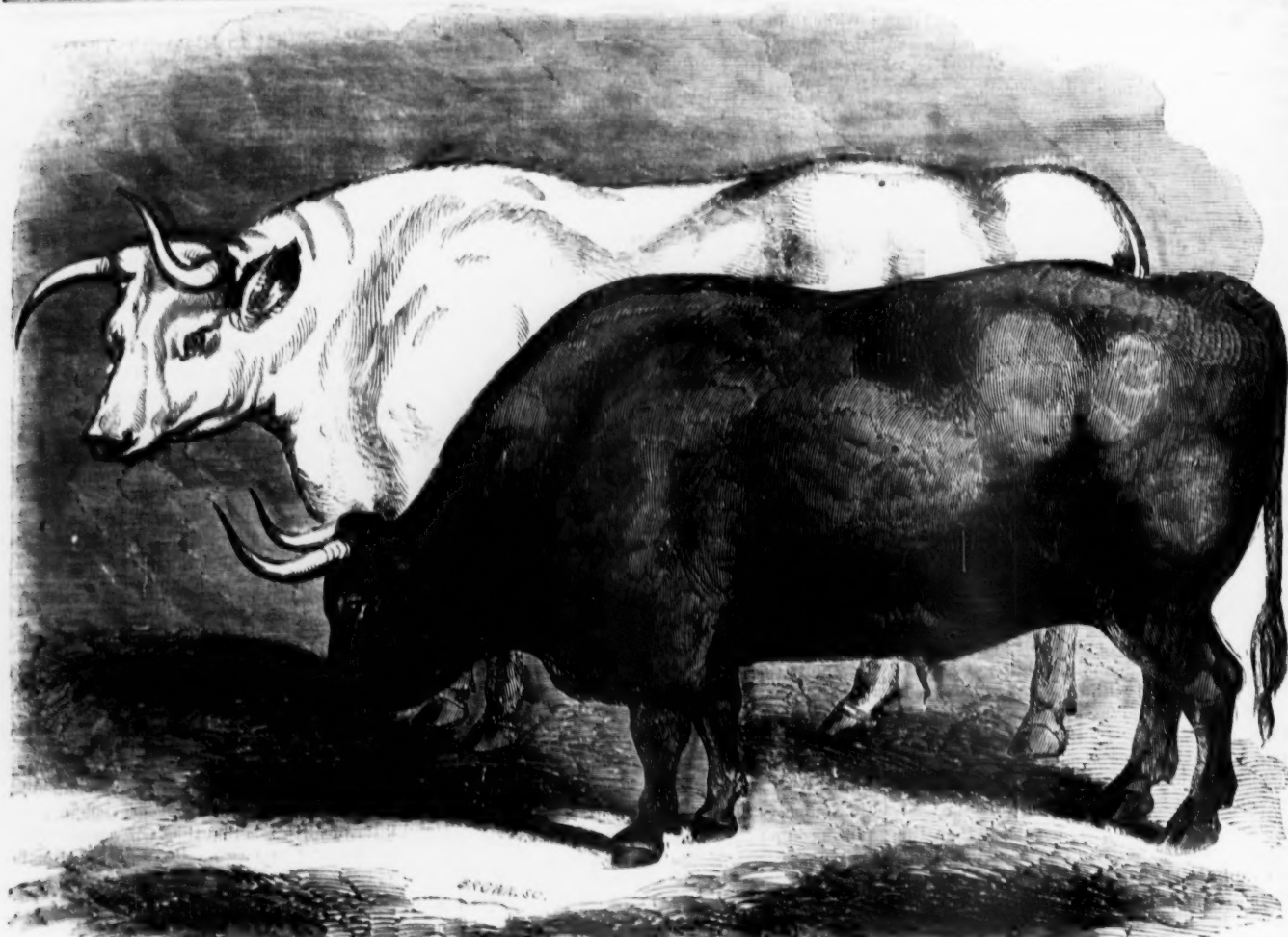
White Bullock "Pride of Livingston."

LETTER FROM HIS FEEDER—W. G. MARKHAM.

"Pride of Livingston" was sired by bull Goldfinder, out of a three-quarters Durham cow, owned at the time by Wm. McKensie of Livingston Co. Goldfinder was a white bull brought by J. W. Taylor from Kentucky, I think from the herd of Mr. Duncan. The steer was calved in May 1857, purchased by M. Downing of Livingston Co., in 1858, who kept him until the fall of 1860, when I bought him at 5 cts. per lb., weight 2100 lbs. He had never been fed grain of any account until I got him, after which he ate an average of 15 qts. meal and one bushel roots daily during the winter. In the summer while on grass he ate but 8 qts. meal and no roots. The meal fed was of corn, barley and oats in rotation.

He weighed in April 1861, 2,450 lbs.; April 1862, 3,000 lbs.; April 1863, 3,380 lbs.; March 21st, 1864, 3,602 lbs., which I am lead to believe is the heaviest on record. He was always a hearty feeder, and very active. Fearing there might be some dispute about his weight, I had several of the most reliable men in town present, who saw him weighed accurately. Messrs. Beckwith (supervisor of Avon, and on the Committee to purchase the steers) and Shepard and myself made affidavit of his weight.

I exhibited him at the N. Y. State fair at Rochester in 1862, when he was awarded the 1st prize as "Best fat ox." He was familiarly known by a very large circle of acquaintances as the "Genesee Valley Baby." The Livingston Co. people dub him the "Pride of Livingston."



THE MAMMOTH OXEN AT THE METROPOLITAN SANITARY FAIR.—Drawn and engraved for the American Agriculturist.

* The ladies of the Livingston County Soldiers' Aid Society purchased the magnificent white bullock "Pride of Livingston" for \$1000, and included it among their gifts to the Ladies' Metropolitan Fair held in this city in April, thus adding greatly to the interest and materially to the income. The weight of the animal sworn to by responsible parties was 3603 lbs., and he is 7 years old. He was fed by Mr. W. G. Markham of Rush, N. Y., a letter from whom will be found on the preceding page. From his appearance, size of bone, shape of head and horns, etc., we should call him a "Kentucky Durham." He has not taken on fat very uniformly, especially on the fore quarters, and will in our opinion bear another year's feeding, for he is more active, clear eyed, and healthy looking than any animal we ever saw that approached his weight within 300 pounds.

The other, the "Tompkins County Ox," was given by the ladies of that county. His weight was stated as 3556 lbs.; but this was arrived at by measurement and not by actual weighing, as we believe. The weight of the bullock will probably not exceed 3400,—however, this is very handsome. The fat is still less evenly laid on than upon the white one, and he is not so good a handler—but in fineness of bone, head, etc., he is superior. Being 7 years old, though of good constitution and in good health, it is not worth while to make the attempt to give him a greater weight. The engravings above represent these animals very well. They stood separate in large, well littered, loose-box stalls, fed well, and of choice remained standing much of the time. The white bullock is the heaviest

beef animal of which we have any accurate record. Others have been exhibited as weighing 4000 pounds but the statement has never been substantiated by any good testimony.

Milch Cows—Good and Poor.

A good cow is one adapted to the kind of agriculture that prevails where the cow in question is kept. Many of the readers of the *American Agriculturist* value a cow only because she bears them a good healthy calf every spring, suckles it a few months, exercises a cow-discretion in not straying from the herd nor wandering away from its usual haunts; whether she gives 4 quarts of milk a day or 20, it matters not, provided her calf has enough. This estimate of the cow prevails wherever young or beef cattle are the only salable products of the herd. There are many more who value a reasonable amount of milk and make use of it to a considerable extent in making butter and cheese for home use, and perhaps for sale, with whom the cow's chief value is to multiply the race.

As we come toward the network of railroads and canals which cover great sections of our country and place the agricultural regions in such close commercial relations with the great markets, we find milking qualities more and more valued, so that in the great butter and cheese regions, and especially among the milk dairies it becomes the only valued product. The calves are knocked in the head at birth, and their skins only saved. The only ones that escape this fate are the heifer calves of famous milkers; and though it by no means follows that

these take after their dams in milking qualities, but oftener perhaps, after the dam of their sires, there are yet notable instances of close resemblance in all respects between famous old milkers and their heifer calves which has run through many generations of cows and almost of men.

We can expect to raise good milkers only by breeding from bulls that have come of excellent cows—very queens of the milk pail. These are to be found among the breeds famous for milking—the Ayrshires and Jerseys—or among certain strains of the Devons, which often exhibit excellent milking qualities. The only admissible excuse for any body's breeding from grade or common blood bulls, is that they are used to perpetuate if possible the extraordinary milking qualities of their dams. The influence of the dam upon her offspring as regards milk production, is a subject upon which agriculturists need more light. Select calves for rearing from the best milkers, but invariably use bulls from good milch stock.

When the question with the dairyman is how to get a stock of cows that will give him the best returns in milk from a given quantity of feed—we say, go about the country and select the best cows you can find without reference to any thing but soundness, age and milking qualities—(quantity and richness—one, the other, or both). If it be desirable to develop the milking qualities of heifers, without regard to the other points—let them become mothers early—milk them thrice in a day, stripping each time very clean—feed succulent and rich fodder, and while the animal is still growing, in every way promote a strong tendency to milk production.

What is Inside of a Plant.

The series of articles under this head was interrupted by the crowd of other matter last month. Those who have followed them attentively will recollect that it has been shown that the plant in all its parts is made up of cells varying in shape and size, but in all cases exceedingly small, and that all of them are closed, having no visible openings. It is evident from what has been said that the growth of the plant consists in the increase in number of these cells, and this is accomplished by the division of cells already existing. There are some plants



of very simple structure, whose growth can be watched, and they give a good idea of the way in which cells are multiplied in all plants. Some kinds of green scum from fresh water pools are found, when seen under the microscope, to be a mass of very simple plants, so simple that each one consists of only a single cell. Fig. 1, shows one of these plants, a single cell filled with green matter. In time the green contents of the cell divide, as in fig. 2, a cell wall grows over each part, the old cell containing them breaks away and two plants come forth, each of which, after growing to the size of the original, repeats the multiplying operation. At fig. 3, a similar plant is shown dividing into four. In this simple plant we have in the first place the division of the cell into two or more, and afterward the growth of these small cells to the size of the original. All plants increase in size thus—the already formed cells subdividing and those newly formed in this way growing to the size peculiar to the kind of plant. As there are ordinarily many millions of cells contained in the space of every cubic inch, it is evident that in quick growing plants they must multiply with wonderful rapidity. Before taking especial notice of the contents of the plant cells it is well to consider the manner in which liquids pass from one cell to another. We know in a general way that the roots take up liquids from the soil, and that these are conveyed to the leaves where they are evaporated and otherwise greatly changed before they are fitted to contribute to the growth of the plant. From what has been seen of the internal structure of the plant we know that there are no long tubes or veins, for the movement of the sap, as many suppose, but its whole circulation consists in a transference of the liquid from cell to cell. Though the microscope shows no opening communicating between adjoining cells, yet their walls will allow the passage of liquids. There are several forces at work to cause the rise of crude sap into the tissues of the plant, one of which is evaporation. That this goes on at a large rate is well established by experiment; a sunflower three feet high has been found to evaporate nearly a quart of water during the day. The amount which passes off from the leaves by evaporation must be supplied from the root. Some idea of the part which evaporation plays in causing the rise of liquids in the plant may be had from a simple experiment, shown in fig. 4, which represents a small

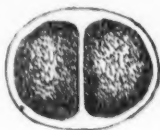


Fig. 2. CELL DIVIDING.

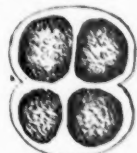


Fig. 3.

funnel with its neck drawn out into a long tube. The mouth of the funnel is covered with a piece of bladder, both it and its tube being completely filled with water; it is then placed with its lower end dipping in mercury and supported in an upright position. Evaporation will go on from the surface of the bladder and as the water passes off in this way the mercury will rise to supply its place and in time fill the tube. Mercury we know to be fourteen times heavier than water, and, as we have not space to state the reason of this rise, we may say, in language which, though not scientifically accurate, will answer our purpose, that the force of evaporation has lifted an ounce or more of mercury through a space of several inches. Another and peculiar force is at work within the plant which may be briefly stated thus: when two liquids of unequal density are separated by a membrane through which they can pass, they tend to mix, but the light liquid passes through the membrane into the dense one much more rapidly than the heavy liquid passes into the light one. This force, called *osmose*, can be illustrated by an experiment with the long tubed funnel of figure 4. Over the mouth of the funnel a very thin piece of bladder is tied, and the funnel part is filled with molasses and water, and then set in a vessel of pure water as in fig. 5. We here have the lighter water, separated from the heavier syrup in the funnel by means of the bladder. The flow of the water through the membrane into the funnel will be much more rapid than the flow of the sweetened water out of it, and the consequence will be that the liquid will rise in the tube. This ascent of the liquid will take place through several feet of tube and if this is bent over as in the figure, the liquid will flow out in drops. This action will continue until the contents of the funnel and of the vessel become of equal density. Now let us imagine a single series of minute plant-cells extending from the leaf to the ends of the roots of the plant. We have here a great number of small closed bags containing liquid, the upper ones of the series being in the leaf where evaporation can take place, and the lower ones in contact with the soil. By evaporation the contents of the uppermost cells will become thickened and a flow will set in from the cells just below them: and as the density of the contents of these cells changes they will draw upon those below, and evaporation alone will be sufficient to set a flow in an upward direction. To this is added the force of *osmose*; where the contents of adjoining cells are of unequal density, there is as we have already seen a powerful tendency of the two to interchange. There are other conditions, such as the chemical nature of the cell contents which modify the transference of the liquids from one cell to another

which can not well be stated here, but from what has been shown of the internal structure of the plant and the illustrations of the effect of evaporation and *osmose* here given, it will be evident that the juices of the plant are transferred from one part to another in obedience to very simple physical laws.

How do Flowers Become Double?

The question is frequently asked of the *Agriculturist*, how this or that flower "can be made to bloom double." There is no way in which double flowers can be produced at will. There are natural tendencies in many plants to become double, and these manifest themselves in two ways; one is the production of two or more petals in the place of one, and another is the readiness with which stamens are converted into petals. An illustration of the fact that the last



Fig. 1.—STAMEN.

really takes place, may be seen in a half-double rose, where stamens may be found in the transition state, so to speak, that is part stamen and part petal. Fig. 1, is a rose stamen, fig. 2, a petal, and fig. 3, a stamen that is half of each. Many other double flowers will afford interesting illustrations of this kind. In the Composite-family to which the Aster, Dahlia, Marigold, Sunflower, etc., belong, what usually passes for a flower is in reality a collection of numerous small flowers gathered closely into a head. There are in most plants of this kind cultivated for ornament, two sets of flowers. Those in the center of the head of a single one of those noted above, are small and tubular, with small teeth at the top as in fig. 4. The flowers on the circumference of the head are much larger and instead of being tubular, are flat and ribbon-like as in fig. 5. This is just as if fig. 4 had grown larger and been split down on one side, and then spread out flat. The doubling of flowers of this kind consists in the conversion of the flowers like fig. 4



Fig. 2.—PETAL.



Fig. 3. HALF PETAL.

into those like fig. 5. These changes or sports take place in some plants in the wild state, but they are more likely to occur in cultivated ones. When a tendency of this kind is noticed, the



Fig. 4.—EVAPORATION. equal density are separated by a membrane through which they can pass, they tend to mix, but the light liquid passes through the membrane into the dense one much more rapidly than the heavy liquid passes into the light one. This force, called *osmose*, can be illustrated by an experiment with the long tubed funnel of figure 4. Over the mouth of the funnel a very thin piece of bladder is tied, and the funnel part is filled with molasses and water, and then set in a vessel of pure water as in fig. 5. We here have the lighter water, separated from the heavier syrup in the funnel by means of the bladder. The flow of the water through the membrane into the funnel will be much more rapid than the flow of the sweetened water out of it, and the consequence will be that the liquid will rise in the tube. This ascent of the liquid will take place through several feet of tube and if this is bent over as in the figure, the liquid will flow out in drops. This action will continue until the contents of the funnel and of the vessel become of equal density. Now let us imagine a single series of minute plant-cells extending from the leaf to the ends of the roots of the plant. We have here a great number of small closed bags containing liquid, the upper ones of the series being in the leaf where evaporation can take place, and the lower ones in contact with the soil. By evaporation the contents of the uppermost cells will become thickened and a flow will set in from the cells just below them: and as the density of the contents of these cells changes they will draw upon those below, and evaporation alone will be sufficient to set a flow in an upward direction. To this is added the force of *osmose*; where the contents of adjoining cells are of unequal density, there is as we have already seen a powerful tendency of the two to interchange. There are other conditions, such as the chemical nature of the cell contents which modify the transference of the liquids from one cell to another



Fig. 5.



Fig. 4.

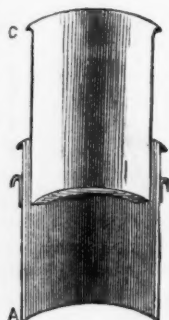
seed of the flower should be carefully saved, as it is very probable that the change will be even more strongly developed in the offspring.

Transplanting and Transplanters.

With many plants it is absolutely necessary that they should be transplanted. They are so small in their young state that they would be quite lost if the seed were sown where the plant is to remain. We therefore sow a great number of seeds in a small space where they can be cared for during their early growth, and when the plants attain a sufficient size they are set where they are to grow. Besides this, it is often a positive benefit to the plant to remove it; the original roots are shortened and induced to throw out numerous fibrous roots or feeders, and its time of maturity is hastened. There is no doubt that many of the plants of our gardens, such as all the cabbage tribe, celery, etc., are much improved by the root pruning they receive in the ordinary way of transplanting; and, in the flower garden, Balsams, Asters, and the like, take on a much better shape and give much finer bloom than if allowed to flower where the seed was sown. On the other hand, there are plants so impatient of removal that it is difficult to transplant them successfully—such as all the Squash-family and Okra among vegetables, and all members of the Poppy-family, Bartonias, etc., among flowers. The time for transplanting is during the early growth of the plant, usually when it has made three or four "rough leaves," as the gardeners call those which succeed the seed leaves. When moved at this time, the plant recovers much more readily than if left until later.

Want of success in transplanting is less frequently due to the injuring of the roots by breaking than to their drying. Where seedlings stand very thickly in a bed, it is not practicable to take them up with earth around the roots; they must be separated and then to keep them from drying it is well to "grout" them. This operation—by some called puddling—is very readily done: it is only necessary to mix any soil with water to the consistence of cream, and draw the roots through it so that they will be covered with a coat of thin mud. Plants with their roots thus protected may be kept out of the ground for a long time without injury. It is sometimes necessary to remove plants after they become too large to transplant with safety in the ordinary way, and several implements have been contrived for effecting this, as well as the transplanting of those which are slow to recover after being disturbed.

One of the commonest of these is like two rather strongly rounded trowels so arranged as to be put in the earth, one each side of the plant, and then to be fastened together and the whole lifted. Another device is represented in the



F. 1. TRANSPLANTER

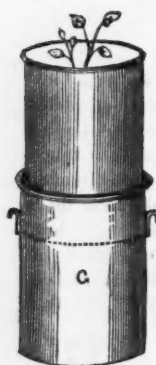


Fig. 3.—TRANSPLANTER IN USE.

figures. It was invented and is used by P. & J. Ten Eyck, of Middletown Point, N. J. The apparatus is made of sheet iron and of a size convenient for the work to be done. Fig. 1 represents a section of the transplanter. A, is a cylinder with a sharp lower edge, having a rim at the upper edge, and convenient handles; c, is a similar cylinder moving within the first, and having on its lower edge a flange, about $\frac{1}{4}$ of an inch wide. This apparatus is first used to make the hole to receive the plant. It is thrust down into the soil with a slight twist. The outer cylinder will penetrate while the inner one will be pushed up. Then by lifting the apparatus the earth it contains will be removed with it, and can be forced out by pushing down the inner cylinder. The same operation is then repeated with the plant, the outer cylinder being pressed into the soil around it, the plant and the surrounding earth lifted, (as in fig. 2,) and the whole transferred to the hole; by holding the inner cylinder firm upon the soil around the plant the outer one may then be slipped out with very little disturbance to the roots. The transplanters to be carried to a distance after being filled, may be set on a board or in a box.

Watering Newly-set Trees and Plants.

Where the soil is rich, deep, and well tilled, and if the planting is done in moist or showery weather, there will seldom be any need of watering. But if really necessary, proceed as follows: Just before setting out the tree or bush, prepare the hole of a generous size, pour water into it and leave it to settle gradually away. Then set in the tree, spreading out the roots and covering them with the best soil at command. This done, mulch the surface with leaves or straw, laying over the whole a few flat stones. A tree or plant of any sort so managed, will seldom need any after-treatment. But if the soil is poor and light, and the season is dry and hot, it may be necessary to help the tree along. Take off the mulch, and three or four inches of the soil, and pour in as much water from which the chill is removed, as is needed to soak the ground, then put back the earth and the mulch. Once or twice during an ordinary season, will be as often as this treatment will probably be needed.

If trees are watered directly on the top of the ground and with no mulch, the soil bakes hard like bricks, and is worse than no watering.

What is Endive?

A subscriber in Kansas, and others inquire what Endive is, and how to cook it. Endive is own brother to the Chicory, grows from seeds and makes a large flat tuft of leaves the first year, and if the roots are kept over, flowers and bears seed the second season. It is not cooked as a general thing, but is used as a salad, though the Europeans sometimes cook it. Its great value consists in the fact that it may be had in mid-summer and later, as it grows well at the time when lettuce will not flourish. Sow in drills a foot apart, and thin or transplant to the same distance each way at any time until August, according as it is wanted early or late. The present month will do for the main crop. As the plant is very bitter it must be blanched before it is fit for use. Blanching consists in excluding the leaves from light and is most simply performed by gathering the outer leaves in the hand and tying them together by the tips over the center of the plant. Another and very

excellent way is to invert over the plants good sized flower pots, each having something laid over the hole to exclude light. The tying up or covering should be done when the plants are free from moisture. In 10 to 15 days the leaves, all except the outside ones, will be found to be white, crisp and tender, and deprived of most of their bitterness. To those who do not dislike a slight bitterness it is an acceptable salad.

Training the Tomato.

Some gardeners think that the best way is to let them alone, allowing them to spread over the ground. They maintain that the heat of the soil hastens the maturity of the fruit. In field culture this must be done, but where there are but few plants it is well to train them on small twigs or pieces of brush stuck in the ground around each plant. This exposes the foliage and fruit to the light and air better than when sprawling in a dense mass on the ground. And the fruit is kept clean. Some make a cheap frame, say two feet high, about each plant or extending along on two sides of a row of plants, over which the branches may be trained as they grow. Drive in crotched stakes two feet high and about six feet apart, on each side of the row, and then lay poles (old bean-poles will answer,) from crotch to crotch. While the plants are small, prop them up with small twigs, and when they reach the poles draw the vines over them. This plan exposes the vines to the sun and makes convenient picking, and keeps the fruit clean.—Persons who have time and patience, may make frames like ordinary grape trellises, and tie their vines to the bars. This makes a handsome show from August to October. The plant if pinched in when young and made to grow compact will be more self-sustaining, and fruit earlier and better than if allowed to grow at will in the usual way.

Sweet Potatoes at the North.

The success which has attended our own experiments as well as those of friends and correspondents, will warrant those who have not made a trial of sweet potatoes to do so with a fair prospect of a remunerative crop. Some who failed in their first experiment have denounced their culture as impracticable, but there is no doubt that the successes largely outnumber the failures. At this late day, the plants must be procured from those who have started them. Any good warm and rather light soil will answer. The ground must be highly manured and ridged; this is done by marking out rows running north and south, at distances of three feet. Spread barn-yard manure or rich compost along the marks, and then form ridges by throwing two furrows together. The ridges may be finished with hoe and rake, and should be about 10 inches high, a foot wide at bottom, and 3 or 4 inches wide on top. Plant as soon as cool nights are over—from 10th to 25th of June. Mark off the top of the rows in spaces 16 inches apart, and set the plants in up to the first leaf, and press the soil well around them. In dry weather water the holes before setting the plants. Where there are many plants to put out, one person may make the holes, a boy drop the plants at them, and one or two others follow to set them. It is best to plant on a cloudy day. The ridges should be kept clean of weeds and the vines occasionally moved to prevent them from rooting at the joints.



The Virginia Fringe-Tree.

(*Chionanthus Virginica*.)

Among our larger shrubs, there are few less known, but more worthy of culture, than the Virginia Fringe-Tree. Though a native of Southern Pennsylvania, Virginia and Kentucky, it is perfectly hardy in New England and Central New York, and possibly further north. It is of rather slow growth, but in good soil it thrives and grows reasonably fast, and is handsome even when small. The leaves are large, six to eight inches long and three broad, oval-shaped, and dark green. We remember seeing a fine specimen near Albany a few years ago. It was about eight feet high, and a globular mass of rich foliage from the ground to the top. Its flowers hang in profusion in long narrow clusters. The petals are usually four (sometimes five or six) very narrow and about an inch long. The general fringe like effect of the flowers has given to it its common name; the botanical name comes from the Greek *Chion*, snow, and *anthos*, a flower, in allusion to their snowy whiteness, or it may be to the appearance of the earth when the petals fall, as they come to the ground in such quantities as to cover it with a snow-like carpet. The plant is also ornamental when in fruit; it bears little stone-fruits somewhat like small plums, which have a dark purple color, and are not eatable. The tree is especially suited to the lawn or front yard. Plants are sold at the nurseries at about 50 cents each; they are raised from seed, and with some difficulty from layers, and by budding upon the common European or the White ash. It makes a handsomer plant when worked on an ash stock. The figure represents a branch of the Fringe-Tree reduced in size.

Pinching the "Laterals."

The advice is often given in articles upon grape culture to "pinch the laterals," a direction which is perfectly plain to a few, but one which to the great majority, needs explanation. When the shoots of a vine push in the spring, they elongate with great rapidity, but after a while small side branches begin to start from the axils of the lower leaves at first, and afterwards from the leaves above them; these are the "laterals." If the whole is left to itself there will be at the end of the season a main stem or cane, bearing numerous branches, which are strong near its base and weaker toward the end. In all good systems of training, these laterals are removed in order to direct all the energies of the plant to perfecting the main cane, and not allow them to be diverted to maturing a number of useless side branches. The operation of pinching the laterals is a simple one, requiring only the use of the thumb and finger, but it is one which must be performed at the right time, and in the right

way. If one makes an indiscriminate onslaught, and breaks out every lateral without regard to any rule, he will do his vine a great injury. In order to show what the laterals are and the manner of treating them, a cut has been borrowed from Mr. Fuller's excellent new work on Grape Culture. The figure shows



two joints of the vine; at the upper one a lateral, *d*, is shown as just starting; this is allowed to grow until it has developed two or three leaves when it is pinched back to one leaf. Soon after another shoot may start from the base of this leaf which is allowed to grow as the first, and this is then to be pinched back to a single leaf. At the lower joint in the figure a lateral

is shown which has been pinched twice; *a*, shows where the shoot was removed at the first pinching; the second pinching was at *b*, and a third shoot is shown as just starting which is to be pinched off at *c*. At the base of the lateral, a bud, *f*, is shown which is to produce the growth of next year. If the lateral were rudely broken out this bud might be injured, or if it were pinched too close, the bud would probably push into growth and the prospects of the vine for the next year be seriously damaged. Hence one leaf is always left at each pinching. This work is to be continued throughout the summer upon vines of whatever age, or however trained, if good well ripened wood is desired.

Notes and Queries on Grape Culture.

Origin of the Creveling.—P. M. Goodwin Esq., of Kingston, Pa., who some years ago sent out the Creveling to his horticultural friends, referring to the account given of its origin, on page 50, February *American Agriculturist*, says: "I have lately made two visits to Bloomsburgh, Columbia Co., Pa., and called upon Mr. Andrew Creveling by whom the following short but reliable statement was made. Mr. Creveling is a gentleman of wealth and respectability, and is held in high esteem by his neighbors. 'His father John Creveling, who had married a Miss Moore, moved from New Jersey to Bloomsburgh about the year 1787, and the vine was found in the forest and transferred to the farm in 1791 or '92. The farm is one mile from the town of Bloomsburgh, and contained originally 800 acres, but has been divided and is now the property of the brothers Andrew and Moore Creveling.' Andrew the elder brother is now probably about 65 years old, and capable of giving a correct history of the origin of the grape. He says his father has often talked with him about it. The original vine although three-fourths of a century old and considerably dilapidated, is still alive and bearing every year. It is on that portion of the original farm now owned by him. The people of Bloomsburgh are exceedingly jealous of any attempt to steal from it its original title of the Creveling grape. There are Creveling vines in Bloomsburgh from the original, said to be 30 to 40 years old, so that the story of its having been brought into cultivation only 20 years since is simply absurd. The Creveling has been badly treated in its native place, and yet is said to bear well and is highly valued."

Norton's Virginia.—Doctor J. G. Zeller, of Woodford Co., Ill., writes that he can not agree with Mr. Husmann respecting the hardiness of this variety. (See page 114, April *Agriculturist*.) During the severe cold of last winter his vines were entirely destroyed, while his Concords, planted close by, had the wood uninjured though three-fourths of the buds were destroyed. He thinks that the buds of Norton's Virginia will stand a lower degree of cold without injury than will those of the Catawba and Isabella, but when the weather is severe enough to kill the wood of the last named varieties, that of the other will be destroyed also. Dr. Z. agrees with Mr. H. as to the healthy and productive character of Norton's Virginia, and its value as a wine grape, and adds the advice we have often given to lay down the hardiest varieties every winter.

IN NAVIGATION we ought to be guided by the pilot; in LIFE by those of better judgment.

It is better that the foot slip than the tongue.



The Bloodroot.
(*Sanguinaria Canadensis*.)

In the rich woods and along shaded banks may be found in April and May one of our prettiest wild flowers, the Bloodroot. It is a pity it has such a sanguinary name, for it is a modest and peaceful looking flower, and one always welcomed with the Spring-beauty, Dog-tooth Violet, and other heralds of the floral season. The flower rises from an underground stem upon a leafless stalk, and is accompanied by a single leaf arising from the same place. It is curious to see how this leaf tenderly encloses the flower-bud as if afraid to trust it to the rude treatment of the fickle season. At last the flower breaks away from the protecting leaf and opens its pure white petals, which seem too delicate to last long and soon fall away. The engraving shows the plant of natural size at flowering time. A fully expanded flower is given and a bud as it first appears above ground. The calyx is of two sepals which fall off as the flower opens, and the petals are usually eight in number, though they show a tendency to increase, and it is not unusual to find twelve or even more. One meeting with the plant a few weeks after flowering would hardly recognize it as the same, as the leaves increase very much in size and take on a coarse appearance much unlike that worn in early spring. The seed vessel which follows the flower is shown in the engraving, of natural size. Upon breaking any part of the plant an orange red juice flows out. It is from this that its botanical name, *Sanguinaria*, was given—*sanguis* being the Latin for blood. This juice is particularly abundant in the underground stem, or root as it is popularly considered. All parts of the plant are acrid to the

taste, and are possessed of emetic and narcotic qualities. The "root" is used in medicine and is an article of trade among the druggists. The principal object in calling attention to this plant is to advocate its introduction into the flower garden. It bears transplanting well, and under cultivation shows a tendency to become double. A small bed devoted solely to it would be effective in early spring, or it may be grown in the border with crocuses and other spring bulbs with which it would give a pleasant contrast.

—0—
A LONG SLEEP FOR A ROSE BUSH.—R. L. Shrock Esq., of Sullivan Co., Mo., set out a Cottage Rose in Oct. 1862; the stem remained green all the following year, but failed to show a bud or leaf. In March 1864, he pulled up the bush to replace it by another, and found shoots two or three inches long springing from the root. The plant had remained dormant for nearly 17 months, and Mr. S. asks if we have known a similar case. Under favorable circumstances, plants retain their vitality for a long time. Of some apple stocks we once buried in a cellar in autumn, a few were accidentally left there and were only found on digging to bury some more a year afterward; they were then just pushing out shoots from their dormant buds. Probably the rose-bush cited carried on a slow vegetation during the year, its green bark supplying in a measure the place of leaves.

—♦♦♦♦♦—
APPLES IN IOWA.—Thos. Paddington, gives the following list of varieties he has found to do well in Linn Co., Iowa. Carolina Red June, Sweet June, Summer Queen, Summer Rose, Benoni, Red Astrachan, Summer Pearmain, Fall Orange, Fall Wine, Sweet Russet, Maiden's Blush, Porter, Yellow and White Bellflower, Red and Small Romanite, Rome Beauty, Danvers Winter Sweet, Hubbardston Nonsuch, Pryor's Red, Fameuse, Ladies Sweet, Jonathan, Monmouth, Pippin, Northern Spy, Pomme Gris, Minister, Raule's Janette, Talman Sweeting, White Winter Pearmain, Wine Sop, Roman Stem.

Chives or Cives.

(*Allium Schoenoprasum*.)

This humble member of the onion genus is one of those old fashioned things which but few think of planting, but which is always acceptable in its season to those who are fond of onions in any form. It is perfectly hardy, being found growing wild in the vicinity of the great Lakes and northward; it is also a native of Europe. The small onion-like bulbs throw up early in spring their tufts of small cylindrical leaves, and later in the season a small umbel of flowers. The plant multiplies very rapidly by the root, and like many other plants which do this, the chives, in the cultivated state at least, have only barren flowers. The engraving shows the plant of about two thirds the natural size, and it will be seen that it is very much like a miniature onion. There seems to be some dis-

agreement as to which of the two English names given above is the proper one, but the weight of authority is in favor of Chives. The young and tender leaves are the part used, and they are much prized by many to flavor salads, soups, omelettes, and for any other purpose for which onions are used. They are sometimes eaten dressed with vinegar in the same manner as young onions. This is a favorite vegetable with the Germans who call it *Schnittlauch*, and use it in a variety of ways, one of which is to chop it very fine and sprinkle it over buttered bread. Its flavor is more delicate than that of any variety of the onion, and where needed merely as a seasoning may in most cases be substituted for it. Chives are propagated by setting small clusters of the bulbs at distances of six inches, in rows a foot apart. They are sometimes set as edging to paths in the kitchen garden, and are well adapted to this purpose. Whether the leaves are needed for use or not, the plant should be cut over frequently to keep the growth young and fresh. In a few years a single bulb will multiply to form a clump six or eight inches in diameter. At the fourth or fifth year after setting, the clumps should be taken up and the



CHIVES OR CIVES.

planting renewed.—This is one of the things, not usually kept at the seed stores and nurseries but may generally be found in old gardens.

Preserving Flowers in their Natural Form.

Several have inquired of the *Agriculturist* how this is done. The details of the process are kept secret by those who practice it as a business, but the general facts are well known. Very fine beach or other sand is used as the drying material; it is prepared for use by washing it until the water no longer comes off turbid, it is

then thoroughly dried and heated and allowed to cool. A common flower pot with the hole stopped up, or other convenient vessel is partly filled with the sand and the flowers are stuck into this; more sand is then added so as to cover the flower. Great care is needed in this part of the operation, and the sand should be filled into and around the flower so that it will be supported on all sides, and all warping or crushing avoided. The pot is filled up with sand and the whole set in a warm place until the flowers are dry. It will require from one to two or three days according to the nature of the flower; the proper time for each can only be determined by experiment. The flowers should be free from dew or other moisture and the sand perfectly dry when used. It is best at each operation, to heat the sand quite hot and allow it to become cool before using. Flowers dried in this way are exceedingly brittle and must be handled with the greatest care. They are usually made into bouquets or wreaths and placed in a glazed frame or put under glass shades.

THE HOUSEHOLD.

The Best way of Preserving Fruits.

The old-fashioned method of preserving fruit by boiling in sugar, 'pound for pound,' is rapidly giving way to the improved plan of sealing in air-tight vessels. By the former process a rich but almost flavorless compound is made, admirably adapted to test the digestive powers, and the cost of the sugar required is no small item. By the latter method the natural taste of the various fruits is mostly retained, the healthfulness unimpaired, the cost far less, and the trouble no greater, if so great. After our experience of half a dozen years, we find bottling fruit much less work than "preserving" it, while it is cheaper and far better every way.

Fruit bottles and jars of several patterns are in the market, some of which possess considerable advantages. We have used the Youman's, the Potter & Bodine, and other bottles, and found them good. Tin cans are objectionable, being liable to rust, and at best lasting but one or two seasons. Porcelain or earthenware will keep fruit well, but glass is better as it admits of readily examining the contents. Although the bottles made especially for the purpose are much more convenient, they are not absolutely necessary to the preservation of fruit. Any vessel that will allow of the easy introduction of the fruit, and of the entire exclusion of air, will answer. We have kept strawberries and other small fruits perfectly, the year round, in common junk bottles, corked and sealed tightly.

Fruits of every kind to be kept in this way should be ripe or very nearly so, sound and fresh. In a very short time after picking, fermentation commences, and there is loss of flavor, and the difficulty of preservation is increased. A porcelain lined kettle, or tinned vessel is preferable to brass for cooking, although the latter will answer if it be first thoroughly cleansed. Only enough sugar to sweeten the fruit for table use need be taken. Even this is not necessary to the preservation of the fruit, as it may be well kept by simply scalding in water and then bottling. But we think it preferable to add the sugar at the time of cooking, as it then becomes better incorporated with the fruit. Make a syrup by boiling one to two pounds of sugar to a quart of water. More water is needed with fruits containing little juice, as pears and quinces, and less with such as peaches, berries, etc. For berries we have simply taken a quarter of a pound of sugar to one pound of fruit, with just enough water added to keep it from burning. When the syrup is boiling pour in the fruit, which will of course cool it somewhat; let it come to a boil again, and cook about five minutes, or just enough to scald it through, and then immediately dip it out

into the bottles which should be filled. Cork the bottles as fast as filled, or screw down the covers, if patent arrangements are used. This should be done while the contents are as hot as possible, as then the small space which remain unfilled, will be occupied by steam, and as this condenses on cooling, a vacuum will remain. Only a little air left would be sufficient to cause fermentation and spoil the preserves. For ordinary bottles, stoppers of compact soft cork are best. They should be soaked in hot-water before using, so that they may be crowded in closely. Force the cork in a little below the top of the neck, and then fill the remaining space with cement made of $1\frac{1}{2}$ ounces of tallow to 1 lb. of rosin. Additional security is given by inverting the bottles and dipping them into a tin "patty-pan" partly filled with cement. These will prevent the stoppers being forced in by the pressure of the air when the contents of the bottles cool. In place of the "patty-pans" small blocks of wood partly bored through to receive the cement, will answer every purpose. Care must be taken to have the bottles well heated before introducing the boiling contents, otherwise many will be broken. To do this, partly fill them with water set them in a vessel of cold water upon the stove and let it heat to boiling, while cooking the fruit.

Where it is desired to keep fruit without sugar, put it in bottles, fill them with cold water, and loosely put in the corks, which should be long and soft, and previously soaked in hot-water. Set the bottles in cold water, and heat it up to boiling; let it boil five or ten minutes. Then with a mallet, or other convenient implement force the corks in deep and tight, wire or tie them down, and the work is done. We have seen strawberries and other fruits kept in this way for more than a year.

Hints on Painting.

S. D. Welsh, Esq., of Wyandot Co., Ohio, a practical painter, sends to the *Agriculturist* the following hints, useful to those doing their own painting: "In opening a keg of white lead, break the head in with a hatchet, or if it is desired to save the head, with an old chisel extract the tacks from the upper hoops, drive them up, take out the head and replace the hoops. The paint-can may be a tin pail (or an old oyster can) with a strong wire bail and a wire hook attached, by which to hang it to the ladder. With a strong paddle take from the keg and put into the can enough lead to one-third fill it; pour oil enough over the lead to about cover it, and mix them thoroughly; after this oil is well incorporated with the lead, fill the can with oil, putting in a little at a time, and stir constantly while adding. When ready to apply, the paint should be about the consistence of rich cream. It should be tried on some inferior part at first and made thicker or thinner, as needed. If too thick, it will not work right under the brush, but incline to be sticky or tough. If too thin, it is apt to run, has a yellowish hue and is too transparent. For outside work, use a large brush, with a smaller one to work about windows and other corners. When not in use, keep all brushes in oil, or well cleansed from paint, or they will dry up and spoil. In commencing, take a course of boards (as many as can well be reached) and brush their whole length. Do not leave off painting long enough for the work to dry, until the course is finished. If obliged to suspend the work, leave off about a window, door, or corner. Use boiled oil, and never finish outside work in very hot weather. For outside, the paint for first coats should be thinnish, the second made thick, and the third thicker than the first, but thinner than the second. For inside work there are different methods. It is safe, as a general rule, to use equal parts of naphtha and Japan varnish as a vehicle with which to mix the pigments. Naphtha is used as a substitute for turpentine, which is now very expensive. It is a poor drier. Japan varnish and turpentine are quick driers. Oil is a slow drier, but dries more rapidly when boiled. If the paint is drying too fast while applying it, add more naphtha or a little oil. Positive colors, such as blues,

reds, etc., are seldom, if ever, used on inside work, but a great variety of tints are obtained by mixing these with white. For *straw-color*, use yellow ochre with white; for *flesh*, chrome yellow and a little red with white. *Gray* is made by adding to the white a very little black. Red and black make brown. Be very careful in mixing colors with black, or the desired tint may be neutralized. If *dry* colors are used with white, they should always be rubbed up with a little naphtha or turpentine before mixing. Make experimental trials for desired tints upon short boards, noting each time the proportion of color used. After the first coat is dried hard it is to be rubbed down with sand paper (laid under a little block) before applying the next coat. If the work is to be varnished, use Dammar varnish for all light colors.

About Good Bread and Some Other Things.

JACK FROST'S LAND, March, 1864.

MR. EDITOR—Dear Sir:—Your correspondent, "Crusty Bachelor," in the *American Agriculturist* for January, page 23, asks "Why so much poor bread?" I admit his statements are correct, but "what constitutes good bread?" will be settled when "what constitutes beauty?" is decided. Some persons like (they say) "very tough bread," while others will only eat that which is delicate and tender. Let tastes differ as they may, the best quality of fine bread, whether lightened by 'hop yeast,' 'Prof. S's Compound,' or 'milk-rising,' is so nearly alike, that a majority of critics (like Mr. Crusty B.) cannot tell which yeast was used.

The science of fermentation is not sufficiently studied by those who fail, for more failures arise from want of proper fermentation than from injudicious baking. Some 'poor bread' is caused by pure carelessness; it is less trouble to make it 'moist, anyhow,' than 'to fuss and sponge it, and all that'; while a person of opposite proclivities is apt to have so many irons in the fire that some of them burn—bread, for instance.

Many a loaf of 'poor bread' has been made because an ambitious mother had her daughter taught to dance, draw, paint, play and sing, so 'she can marry a rich man, and never have to work.' And you may tell C. Bachelor that gentlemen sometimes prefer that sort of girls. The quiet daughter who 'helps mother' is often overlooked and neglected, while her sister, with the aforesaid accomplishments, who spends more time upon flounces, jackets, ruffles—and Demorest only knows what—is invited to party, concert, or lecture, and is the sole recipient of all the attention of Mr. McFlimsy and, perhaps, Mr. McSolid also. When young gentlemen ask young ladies, "Can you make good bread?" as frequently as they have hitherto asked, "Can you play?" etc., the supply of good housekeepers will equal the demand, not only in quantity, but in the kind asked for.

Some intellectual men have given us to understand that a woman's head is not nearly large enough to contain a knowledge of books and work too, and she must know whether Dr. Johnson or Bayard Taylor "wrote Shakespeare," instead of doing only "what a servant can do just as well." The result of this theory is, that many a girl is led to look on a barrel of flour (and perhaps the farmer who produced it) with unfeigned contempt, to read novels, and write 'high pressure' stories for the magazines. Once upon a time a highly gifted editor of N. Y. wrote a story, and in disposing of his heroes two go to sea, one becomes somebody, the other was so "stupid they could only make him cook." You have my permission to go into said editor's sanctum and ask him "if in order to cook it is necessary to be stupid?"

As to C. Bachelor's idea of apprenticeship, it is always understood that a girl is apprenticed to her mother to study the whole art of housekeeping, cooking included, (some would like it 'perfect in six lessons,') and if the mother does her duty, the daughter will learn that all other things being equal, the comfort and happiness of a family when she is its associate partner, will depend upon

her. Then, when she becomes a wife, if she be wise, she will "rise while it is yet night," make, or see that good bread is made, "and give a portion to her maidens," family, and visitors. I hope your lady readers, more competent than myself, will answer C. Bachelor's questions, and that his Lordship's crustiness will become like that of good bread—its most delicious part.

Good bye. FLORA DALE.

Good Yeast and Good Bread.

A "Practical Baker" at Franklin Co., Kansas, sends to the *American Agriculturist* the following directions for making good yeast bread: "Pare and boil potatoes sufficient to make one pint when mashed, with water enough to scald $1\frac{1}{2}$ lbs. flour. (The water from the potatoes is important, as it contains a great part of the substance of the potatoes.) A small handful of hops in a cloth should be boiled with the potatoes. Scald the flour, mash the potatoes and mix well. When cool, add about one pint of good hop yeast. This should be made about noon the day before baking. Next morning set the sponge with warm water—a pint for a loaf; put in a handful of salt, and stir to consistence of thick batter. Set in a warm place and let it rise, and when light, add a piece of alum the size of a large hazel nut, dissolved in $\frac{1}{2}$ pint of hot water, and then knead until it works free from the hands and pan, making the dough rather stiff, (many knead too little and have the dough too thin); then spread over and work in slightly $\frac{1}{2}$ tablespoonful of lard. Set in a warm place and let it rise until very light. Mould into pans; let it rise again, and bake in 4 large loaves. It will be done by noon. "Our starting yeast is made and kept as follows: Scald one large teacupful of flour with very strong hop water; when cool, add yeast; let it rise and fall; rub dry and fine with flour; spread out to dry in a cool room. The morning before making yeast, soak a teacupful with warm water and keep warm. When this is used put no hops with the potatoes."

Another Method.—Contributed by Mrs. McClellan, Sandusky Co., O.: To 3 qts. water add 1 pt. hops, tied in a thin muslin bag; boil $\frac{1}{2}$ hour; remove bag and stir in thickening made of 1 pt. flour, 1 tablespoonful sugar, 1 do. ginger, 1 do. salt. Let this boil up once. When lukewarm, add $\frac{1}{2}$ pt. yeast to raise it, and when light bottle. It must not be corked tightly for 24 hours. After that, the tighter the better. A jug holding 1 gallon, glazed inside and out, is best for keeping yeast. It should be washed with care every time new yeast is made.

Bread.—1 qt. warm water, or better, 1 pt. water and 1 pt. new milk, mixed with flour to a thick batter, $\frac{1}{2}$ cup yeast (as above). Set at night. In morning mix and mould well, setting again to rise. When light, re-mould and put into pans for baking. If tender crust is desired, wrap the bread in a towel wrung out of cold water, and this again in a dry towel, immediately after taking out of the oven. The above quantity will make two loaves.

More Bread.—An experienced baker sends the following directions to the *American Agriculturist*: Wash clean and boil 4 lbs. of potatoes, not peeled; the best part of the potato is near the surface. The diastase which surrounds the eye of the potato greatly promotes the fermentation. Pour the water from the potatoes, and while hot, mash them up fine and add sufficient water to make a batter about as thick as for griddle cakes, put in a handful or two of flour and mix well; crush all the lumps and when the mixture is about as warm as new milk or about 90°, mix with it a few spoonfuls of yeast, and cover it with a cloth, and keep it moderately warm until morning. Then strain the mixture through a corn meal sieve, and work in about 12 lbs. of flour, or until it is thick enough, and set it in a warm place to rise. If this plan is followed out thoroughly, it will make more good, light bread that will keep moist longer, and will be better than with flour alone.

To ANNEAL BAKING PLATTERS.—Earthen dishes when new are liable to crack the first few times

they are heated. "Ann Eliza," Cold Spring, L. I., writes to the *American Agriculturist*: "Before the dishes have been used, soak them in warm water a few hours, and then grease them on both sides the first two or three times they are used to bake upon," which she says will prevent their cracking.

Music at Home.

No family can afford to do without music. It is a luxury and an economy; an alleviator of sorrow, and a spring of enjoyment; a protection against vice and an incitement to virtue. When rightly used, its effects, physical, intellectual and moral, are good, very good, and only good.

Make home attractive; music affords a means of doing this. Cultivate kindly feeling, love. Music will help in this work. Keep out angry feeling. "Music hath charms to soothe the savage breast." Be economical. Pleasure, recreation, all must have, and no pleasure costs less in proportion to its worth than home music. Make your sons and daughters accomplished. What accomplishment is more valuable than music? Fit your daughters to support themselves in the future, if need be. There has been no time in many years when any young lady having sufficient knowledge to teach music could not pleasantly earn a respectable support in that way.

"But," some may say, "I have no ear for music, nor have any of my family." Probably not one of you has ever tried it faithfully. Perhaps your sons had no natural "ears" for reading, or your daughters natural hands for writing; and certainly unless they had learned these things they would never have been accomplished in them. Music does, indeed, come more naturally to most people than many other accomplishments that are next to universal; yet it does not come to all without much time spent in careful cultivation.

The one best means of introducing music to the family, and inducing its cultivation is to procure a good musical instrument. If none of your daughters or sons can play at all, yet if they have a good instrument at hand, some of them will learn. In almost every family this will be the case. Buy an instrument and try the experiment; if it succeeds only to a very small extent, the cost will be repaid many fold.

The "Religious Dodge."

There is a class of rogues and swindlers in this city who in the language of the police are on the "serious dodge." Bad women and men dress in the deepest mourning, wear the blackest of veils and the widest of weeds, and in other ways imitate those in affliction, in order to work upon the sympathies of the benevolent and unsuspecting. There are certain quacks who go upon what may be called the "religious dodge," and "assume the livery of heaven to serve &c." It is always well to be shy of Reverend dabblers in physis. A clergyman who attends to his proper duties has enough to do, and had better leave the bodies of people to be looked after by others. Among the most conspicuous of these "Reverend" gentlemen just now is the "Rev. Charles E. King," who advertises to send ~~Free of cost~~ his prescription for the "cure of consumption and other diseases." We have one of these prescriptions with the accompanying documents before us, and are disposed to give the Rev. Charles E. the benefit of a gratuitous advertisement, and "from a sense of humanity" make his prescription more widely known, which will no doubt gladden his benevolent heart. The first article in his prescription is five ounces of the leaves of "*Viroa monogynia*," and the next—but we need not go on, as the leading and most important article is not known to druggists nor to botanists, and like *Veronica quinquefolia*, is a fancy name applied to nobody knows what. Here is just where the joke comes in; the "Reverend" Charles knowing that his "*Viroa*" is not "always (?) to be obtained," proposes at the end of his circular to under-

take the preparation of his own prescription for money—all of which is very good of Charlie. He is a very benevolent man to the tune of Two Dollars a pint. Every body who should happen to want the stuff, can send in their orders to Station D, Bible House, an excellent address to give the thing a religious look to people in the country, though every body in New York knows that this is one of the regular U. S. Mail stations, and has no more to do with the Bible Society than have the shoemakers or other tenants of the Bible-house. In addition to his printed circular the "Reverend" Charles throws in one done in the best style of lithography, which is edifying reading on account of "its earnest prayer" and moral and religious teachings, and to make good measure he adds a printed tract on "Solitude and Sorrow considered as God's Agencies." This is doubtless a thoughtful care for the surviving friends of those who not getting the prescription made up of pure articles, should fail to get cured. This tract by the way, purports to be published by the "New Tract Society," a concern not known to our religious community and which with commendable modesty, withholds its address.—Charles E. King you call yourself Reverend, and add M. D., and L. L. D. to your name. If these really belong to you we advise you to drop them while you are engaged in this business, or you will bring titles which should always command respect, into disgrace.—Drop your divinity or your quackery, Charles.

Hints on Cooking, etc.

The Apple Pie Melon.—Having tried this once, we discarded it as worthless, but the fault might have been in the cook and not in the melon. A. P. Blodgett, Esq., Middlesex Co., N. J., is quite enthusiastic in his praise of it, as a material for pies, preserves and sweet pickles. Half a lemon or half a teaspoonful of tartaric acid are added to each pie. For "apple sauce" to 3 lbs. of the melon prepared for cooking, 1 lb. of sugar, a teaspoonful of tartaric acid and a little extract of lemon are added. Another use for the fruit is to fry it in the same manner as the egg plant, when it is said to not be distinguishable from that vegetable. The vine bears well and the fruit keeps through the winter.

Good Pies.—Contributed to the *American Agriculturist* by Mrs. Thos. W. Rhodes, Cayuga Co., N. Y. **Cider Pie.**—Mix 1 cup of boiled cider, 1 cup of water, 1 cup of sugar, 1 egg, 2 tablespoonfuls of flour and a little salt. Should the cider be thick, use two thirds of a cup and fill the cup with water. Bake with single crust like custard pie.

Cream Pie.—In 1 pint of sweet cream stir 1 tablespoonful of flour, $\frac{1}{2}$ cup of sugar, a little salt; flavor with nutmeg or extract of lemon; make the crust single the same as the preceding.

Strawberry Jelly.—Contributed to the *American Agriculturist* by Asenath Doan, Athens Co., O. Take ripe, perfect strawberries, pick off the husks, place the berries in large (but not deep) dishes, saturate well with refined brown sugar, and set the dishes on the cellar floor to keep them cool. Early the next morning drain off the juice, being careful not to mash the berries. (I make pies of the berries and they are pretty good.) Stew the juice over a slow fire until it begins to thicken, then stir in as many cups of sugar as there are of juice; keep it cooking slowly and well stirred until the sugar is well dissolved. I prefer a stone common milk crock to stew it down in. When a little cool put it in glass tumblers, and when cold cover tight with two or more thicknesses of white paper and keep in a cool dry place.

Raspberry Short-Cake.—Contributed to the *American Agriculturist* by Ada Martin, Clarke Co., Iowa. Mix dough as for biscuit; roll it thin as pie crust and cut in sheets the size of a bake-tin. Place one of these in the tin, then a layer of ripe strawberries, then more dough, and so on for three layers of dough, and two of berries. Cut small holes in the top crust, pour in a little water, and lay on a few small lumps of butter, and bake half an hour. Serve with sweetened cream.

Pickled or Spiced Currants.—Contributed to the *American Agriculturist* by "F. I. T.," Staten Island, N. Y. Take 8 qts. ripe currants, 4 lbs. sugar, 1 pint vinegar, and ground spices to taste. Boil about an hour, put in jars and cover as other preserves. After a few months it is quite equal to cranberry jelly.

Pudding Sauce.—"Buckeye" wishes to know, what is the sauce of the consistence of ice cream which is served with puddings in city restaurants. It is, what is known as hard sauce, and is made by beating butter with twice its weight of powdered white sugar, until the whole is brought to a smooth mass. It may be flavored by stirring in a little wine, some lemon juice with grated rind, or nutmeg. In cold weather it is necessary to let the butter soften, but not melt, in a warm place.

Cream Muffins.—Contributed to the *American Agriculturist* by a Lady: Mix 1 pt. sour cream, (but not very sour) 1 pint flour, 3 eggs, 1 teaspoonful salt, $\frac{1}{2}$ teaspoonful soda or saleratus, whites and yolks of eggs beaten separately. Stir in the whites the last thing. They are much nicer baked in new cups, which can be bought of a cheap kind. Wipe them clean with a dry cloth, never wet or grease them; in a short time the muffin will shine like varnish on the side next the cup.

Fritters.—Contributed to the *American Agriculturist* by Mrs. Frances W. B. Robbins, Suffolk Co., New-York. Beat ten eggs thoroughly, mix with two quarts cold water, one teaspoonful of salt, add flour to make a batter the thickness of griddle cakes; fry by the tablespoonful in fresh hot lard. Excellent, especially if eaten with maple molasses.

Corn Starch Cake.—Contributed to the *American Agriculturist* by "Young Housekeeper." Mix 1 egg, 2 cups of flour, 1 cup of milk, 1 cup of sugar, 1 teaspoonful of soda, 2 of cream of tartar, piece of butter half the size of hen's egg, melted; bake the same as for jelly cake, in shallow tins, and when cold, pile in layers, with a custard between made as follows: Take 1 egg, 1 cup of milk, sugar to taste, 2 teaspoonfuls of vanilla extract, 1 teaspoonful of corn starch. Boil the milk, beat the egg and corn starch together, and stir into the boiling milk which must previously be sweetened; when cold, stir in the vanilla; the custard must cool before being put with the cake.

BOYS & GIRLS' COLUMNS.

The Insects and the Birds.

Robert was very fond of hunting. In the neighborhood where he lived there was no game worth shooting, except now and then a fox, a rabbit, a partridge or a wild pigeon, and these were too shy for his skill. There were however plenty of robins, bobolinks, meadow larks, yellow birds and sparrows, (chipping birds he called them) and it was his great delight to bring them down with stones, or with shot when he could coax some unthinking person to lend him a gun.

One warm day in June, Robert had been very successful in shooting birds; he had silenced the sweet song of many a little warbler, and left many a poor fledgling to perish in its nest for want of its mother's care. Being warm and tired he lay down on the grass, in the shade of a large elm, and soon saw some very curious things. A monstrous mosquito came and perched on a limb overhead, and began to blow a horn which he carried. Immediately a great crowd of insects, flies, bugs, beetles, grasshoppers and crickets came swarming to the place, filling the branches of the tree and the ground around it. After them crawled an innumerable host of worms, large and small—such a surprising collection was never before seen. Presently a huge locust sitting in a fork of the tree, for a chair, called this strange meeting to order and said: "It is well known to all of you that our lives are in constant danger from the ferocious birds which abound in this neighborhood. Not a day passes but thousands of our unlucky tribes are remorselessly snapped up by these singing robbers, who are the greatest helps of our other enemies, the human race, in our destruction. But I have the pleasure to announce to you, that we have at last found a friend, where we least expected it. This young man whom you see near you has come to our rescue. He saved my head this morning by instantly killing a black-bird that was just about to dart down upon

me, and he has slain dozens of the robins, cat-birds, sparrows and other wretches that have picked up so many of our unlucky relatives. If he continues this good work we shall soon have the best of times. The farmers have sowed plenty of grain, the gardeners are raising abundance of vegetables, fruit and flowers, and we shall have nothing to do but live on these fine things and enjoy ourselves on the fat of the land. Now then I propose that we all do him honor. "Agreed! agreed!" shouted the whole multitude together. "We'll spin handsome webs all over his bed room," said the spiders; "We'll build beautiful mounds in his front yard," cried the ants; "We'll sing for him all night," chimed in the mosquitoes; "We'll dance around him all day," put in the fleas; "We'll make a nest and spin our finest yarns in his trees," added the caterpillars, and so the whole throng of insects agreed show their regard. A huge green tobacco worm was particularly delighted. "I want to embrace him," said the frightful creature, and "I too," said all the others; and with that they all made toward the poor boy, who was too much astonished to move. One company crawled up to his face, another buzzed around his ears, and others scrambled over his naked feet, until he gave a loud cry of disgust and horror, and awoke from his curious dream, to find a mosquito singing at his ear, a caterpillar crawling over his hand, and several large red ants creeping up the legs of his pantaloons. He has never shot a bird since that day, and we commend his experience and his resolution to the boys of the *American Agriculturist*.

About Great Men and Boys.

Among the mountains of California stand some of the most wonderful trees ever discovered. They tower up more than three hundred feet, or taller than the highest steeple in this country. There they stood hundreds of years before civilized men ever saw them. But they were just as grand while alone in the solitude of the unbroken wilderness, when only visited by the winds, the wild beasts and birds and the equally wild Indians, as they are now, when travellers flock to admire their stateliness. So all truly great men possess the same nobleness of nature before, that they do after the world has discovered, acknowledged, and applauded it. Those who long for opportunities of becoming great, forget that greatness is in the man, not in the opportunity. The opportunity only gives occasion for greatness to exhibit itself. Washington possessed the same high qualities when he told the truth and loved his mother, as when he headed the American armies, and presided over the councils of the nation. A man may be great, though circumstances confine him to a narrow sphere, just as a ray of light is as pure, as cheerful, and as much the child of the sun when shining in a rude hovel, as when flashing from the mirrors of a palace. Goodness, courage, devotion, manliness, patience, perseverance, reverence, and love, will make a boy great, though he live on the most secluded farm in the back-woods. There are thousands of such boys—many of them will read these words written for their encouragement. The day may come when their noble qualities will be wanted in the public service, and all men shall see and acknowledge their worth. But if not, they are still rich in enduring wealth, and let them remember also, that life only begins in this world.

How the Soldier Sleeps.

B. F. Taylor in the Chicago Journal gives the following graphic description of what he often witnessed in camp. "You would, I think, wonder to see men lie right down in the dusty road, under the noon sun of Tennessee and Alabama, and fall asleep in a minute. I have passed hundreds of such sleepers. A dry spot is a good mattress; the flap of a blanket quite a downy pillow. You would wonder to see a whole army corps without a shred of a tent to bless themselves with, lying anywhere and everywhere in an all-night rain, and not a growl nor a grumble. I was curious to see whether the pluck and good nature were washed out of them, and so I made my way out of the snug, dry quarters I am quite ashamed to say I occupied, at five in the morning, to see what water had done with them. Nothing! Each soaked blanket hatched out as jolly a fellow as you would wish to see—muddy, dripping, half floundered, forth they came, wringing themselves out as they went, with the look of a troop of "wet down" but hearts trumps every time. If they swore—and some did—it was with a laugh; the sleepy fires were stirred up; then came the coffee, and they were as good as new."

Answers to Problems and Puzzles.

The following are the answers to the puzzles in the May number, page 151. No. 80 *Illustrated Rebus*.—*Awl weighs bee pre (paired) four change*; that is, always be prepared for change. No. 81 *Word Puzzle*.—*Man-slaughter*, which, cut in two, gives *man's laughter*. No. 82 *Pictorial Proverb*.—*Bear and for-bear*. No. 83 *Geographical Question*.—*Washington*. No. 84 *Illustrated*

Rebus.—*Types and the steam engine* were pie (on) ears of ass t (on) lah (in) g chain gas; that is; Types and the steam engine were pioneers of astonishing changes. No. 85. *Puzzling Dinner*.—1, Turkey; 2, Spare rib; 3, A goose; 4, Onions; 5, Pears; 6, Greens; 7, Potatoes. The dessert; Pies of gooseberry, currant, dried pears, and pump-kin. The following have sent correct answers up to May 5th. "Katie and Mattie," 77, 78, 79; C. N. Goodlander, 77; Frank, B. Bourne, 77, 79; Lorenzo Ayres, 79; John J. Weeks, 79; Eliza A. Kayes, 79; H. H. Os-good, 77, 79; George I. Richardson, 77; "Erastus," 79; H. Martin Kellogg, 79; Henry C. Fox, 79; W. A. V., 77; Charles J. Cook, 78, 79; G. G. Cantner, 77; Amos H. Rogers, 79; S. B. Marks, 79; J. H. Griffith, 79; R. D. C. Van Antwerp, 79; Fanny Horton, 77; H. S. W., 79; J. M. Sanford, 79; O. J. Sigon, 77, 79, 80; L. Howell, 78, 79; C. H. St. John, 79; B. B. Beeson, 79; James Dills, 79; Mary W. Mason, 79; William Bright, 77; Jno. H. Peelle, 76; Solomon Boneer, 79; James Reid, 79; Herbert Frisbie, 79; Mary E. Metcalf, 77; Henry See, 79; Martin Morrison, 79; George M. Gould, 79; Albert S. Gifford, 79; "A Reader," 79; Lucy and Ida M. Lazear, 77, 79; Miner S. Baldwin, 79; L. L. Fisher, 78, 79; D. J. Ellworth, 79; John T. Marvin, 79; Daniel I. Rowe, 70, 77, 79; Wesley Harvey, 79; John C. Green, 79; M. Amelia Hough, 77, 79; C. A. Kaufman, 79; P. A. Ross, 79; Maggie Campbell, 79; David L. Reed, 77; D. W. Bottorf, 79; S. O. Downe, 79; Eusebius K. Hersey, 79; H. Hudgens, 77; Jacob H. Van Ness, 79; Levi M. Frisbie, 79; Amos Dean, 79; Lester Barnes, 79; O. P. Egenbright, 79; Eddie Dickinson, 79; Wm. Yates, 77, 79; J. H. Simpkins, 79; John W. Day, 79; Daniel Arney, 77; John Persing, 79; Jonathan S. Cook, 79; F. A. Saunders, 77; Edward V. Gilman, 79; Etty Beyea, 79; Thos. E. Morris, 78; Elbert M. Smith, 77, 78, 79; Lizzie Vaughn, 79; Charles S. Edgar, 79; G. R. Palmer, 77; Selden A. Smith, 79; Emory B. Curtis, 79; J. Boyd, 79; F. P. Wilbur, 79; John W. Emery, 79; Clara M. Stephens, 83; James Parmlee, 81, 82, 84; Erastus Murphy, 83;

New Puzzles to be Answered.



No. 86 Pictorial Proverb.—A truth frequently noticed.



No. 87. Illustrated Rebus.—A proverb for the sanguine



No. 88. Illustrated Rebus.—Worth remembering.

No. 89. *Grammatical Puzzle*.—Contributed to the *American Agriculturist* by G. A. Draper, Essex Co., N. J. "Let the rich, great, and noble, banquet in their halls And pass the hours away, as the most thoughtless revel." Take away one letter from a word in the verse and substitute another, and by that change, totally alter the syntactical construction of the whole sentence, changing the moods and tenses of verbs, turning verbs into nouns, nouns into adjectives, and adjectives into adverbs, etc., and so make the entire stanza bear quite a different meaning from that which it has as it is above.



CAUGHT IN A SUDDEN SHOWER.—Engraved for the American Agriculturist.

These children are in quite a "fix," but they seem to know how to make the best of it. They have run to the nearest shelter, and are patiently waiting until the rain is over. The little boy takes it very coolly as he sits on the bank watching the great drops fall into the little pools. The older girl has not forgotten to take care of her sister, who seems to feel entire confidence in her affectionate protection. In looking at this beautiful picture we are reminded of the old proverb: "When it rains, let it rain." The same bit of wisdom is sometimes stated in another form: "Patiently endure what you can not cure." This lesson is well worth learning. It will save many an uncomfortable hour, and many a sinful thought. Perhaps the best way to form a habit of doing this, is to try and look on the bright side of things. Thus these children may make themselves contented by thinking how much good the rain will do: that it will make the vegetables and flowers in their garden grow; that the dust will all be laid in the roads, and the trees and grass and grain will all be brighter and stronger after the shower. And thus when any trouble comes, as it will be pretty sure to do before you are many years older, it will be much more easily borne, by thinking of the good which may come from it. We may not always be able to see beforehand how disappointment or difficulty will bring a benefit, but if we have proper confidence in the Great Disposer of events, we shall feel certain that every trial will at last bring good. It is related of a workman in an English mine, that, whatever happened, he used to say,

"It's all for the best." One day, just as he was about going down to his work in the deep coal pit, a dog ran away with his dinner which he had laid down for a moment, and he had a long chase after him. As he returned, one of his fellow workmen laughingly asked him, "Do you think that was all for the best?" "Certainly" was the reply. Just then a fearful cry came up from the pit below. The rope had broken by which workmen were being let down, and they had been dashed to the bottom, and most of them killed. If the man had not run after the dog, he too would have been among the unfortunate.

The Boys of New-York City.

THE NEWSBOYS.

Many a lad who reads the *American Agriculturist*, thinks New-York City must be a real paradise for boys, and longs for the time when he may be old enough and have money enough to come here and make his fortune, or at least enjoy himself much better than he thinks possible in the country. We will describe how some classes of boys live here, and it will be seen that many of them have great reason to desire to exchange places with you.

The first class that a stranger here would notice, is the newsboys, or those who sell newspapers, for they put themselves in everybody's way on purpose to be noticed. They swarm around the railroad depots, steamboat landings, hotels, and other busy places, and morning and evening, when the daily papers are issued, their

clear loud cry rings out "Eres the Sun, Times, Tribune, Post, 'Eraid," etc. Most of them have unwashed faces and hands, uncombed hair, unbrushed and unpatched clothes; their language is not choice, and their manners are rough; but with all these drawbacks one has to admire them for their self-reliance, keenness, and persevering industry. They are all sons of poor parents; many of them know little or nothing of their father and mother, but more have been driven from home by the intemperance of their parents to pick up their own livelihood. Hundreds of them have no place they can call home. They sleep in boxes, covered wagons, alleyways, or other out-of-the-way corners, and eat at the cheap restaurants or stands in the streets. They must be on hand at the printing offices by three or four o'clock in the morning to secure a supply of papers to sell. Most of them have their own districts in which to dispose of their papers, and woe be to the strange boy who attempts to start business on his own account in the locality occupied by another. He must be prepared to fight a hard battle, and fairly conquer a peaceable possession. These boys being compelled to look out for themselves, soon become very sharp at driving a bargain, and no one knows better than a newsboy how to take advantage of circumstances. If any important news arrives, and extras are issued at any hour of day or night, they make the most of it, often charging double or treble the usual rates for their papers. In times of great excitement on war topics or other matters, they sometimes make large profits, as high as \$5

in a day, but usually they get only enough to barely live, and to spend now and then twenty five cents for admission to a cheap seat at the theater, circus, or some other place of amusement. A few of these boys go through all the trials and temptations belonging to their calling, and by industry and perseverance, work their way up to high station. More than one now wealthy and respected business man in this City was once a newsboy. But for every such one, hundreds are ruined by the vices which tempt them on every side, and become drunkards, gamblers, or thieves. Within a few years past some benevolent men have been trying to better the condition of the newsboys. They have established a lodging-house for them, where they may readily obtain comfortable quarters. They also have their meetings, a library, and other means of improvement which have already greatly benefited many of them. "I wouldn't be a newsboy," thousands of our young readers are ready to say; but if your parents should come here to live, should die here poor, and leave you to make your own way in the world, this might be almost the only chance open to get a living. Such is the history of many who now sell papers for a livelihood. Hereafter we may give a sketch of how other boys live here to show that boys need not come here for happiness.

HINT FOR THE UNPUNCTUAL.—"Ah, Jemmy," said a sympathizing friend to a man too late for the train, "you didn't run fast enough." "Yes I did," said Jemmy, "I ran fast enough, but I didn't start soon enough."

Business Notices, One Dollar per Line of Space.

U. S. 10-40 BONDS.

These Bonds are issued under the Act of Congress of March 8th, 1864, which provides that all Bonds issued under this Act shall be **EXEMPT FROM TAXATION** by or under any State or municipal authority. Subscriptions to these Bonds are received in United States notes or notes of National Banks. They are **TO BE REDEEMED IN COIN**, at the pleasure of the Government, at any period *not less than ten nor more than forty years* from their date, and until their redemption **FIVE PER CENT. INTEREST WILL BE PAID IN COIN**, on Bonds of not over one hundred dollars annually, and on all other Bonds semi-annually. The interest is payable on the first days of March and September in each year.

Subscribers will receive either Registered or Coupon Bonds, as they may prefer. Registered Bonds are recorded on the books of the U. S. Treasurer, and can be transferred only on the owner's order. Coupon Bonds are payable to bearer, and are more convenient for commercial uses.

Subscribers to this loan will have the option of having their Bonds draw interest from March 1st, by paying the accrued interest in coin—or in United States notes, or the notes of National Banks, adding fifty per cent. for premium,) or receive them drawing interest from the date of subscription and deposit. As these Bonds are

Exempt from Municipal or State Taxation, their value is increased from one to three per cent. per annum, according to the rate of tax levies in various parts of the country.

At the present rate of premium on gold they pay

Over Eight Per Cent. Interest,

in currency, and are of equal convenience as a permanent or temporary investment.

It is believed that no securities offer so great inducements to lenders as the various descriptions of U. S. Bonds. In all other forms of indebtedness, the faith or ability of private parties or stock companies or separate communities only is pledged for payment, while for the debts of the United States the whole property of the country is held to secure the payment of both principal and interest in coin.

These Bonds may be subscribed for in sums from \$50 up to any magnitude, on the same terms, and are thus made equally available to the smallest lender and the largest capitalist. They can be converted into money at any moment, and the holder will have the benefit of the interest.

It may be useful to state in this connection that the total Funded Debt of the United States on which interest is payable in gold, on the 3d day of March, 1864, was \$768,965,000. The interest on this debt for the coming fiscal year will be \$45,937,126, while the customs revenue in gold for the current fiscal year, ending June 30th, 1864 has been so far at the rate of over \$100,000,000 per annum.

It will be seen that even the present gold revenues of the Government are largely in excess of the wants of the Treasury for the payment of gold interest, while the recent increase of the tariff will doubtless raise the annual receipts from customs on the same amount of importation to \$150,000,000 per annum.

Instructions to the National Banks acting as loan agents were not issued until March 26, but the amount of Bonds reported sold at the United States Treasury up to May seventh was

\$44,606,100.

Subscriptions will be received by the *Treasurer of the United States* at Washington, and the *Assistant Treasurers* at New York, Boston, and Philadelphia, and by the

FIRST NATIONAL BANK of New York, No. 4 Wall St.
SECOND " " " 23d St. & Broadway.
FOURTH " " " Pine Street.
SIXTH " " " 6th Av. & Broadway.
TENTH " " " No. 240 Broadway.
New-York Nat. Exchange Bank, No. 184 Greenwich-st.

AND BY ALL NATIONAL BANKS

which are depositaries of public money, and all

RESPECTABLE BANKS AND BANKERS

throughout the country (acting as agents of the National Depositary Banks,) will furnish further information on application, and afford

EVERY FACILITY TO SUBSCRIBERS.

"The Human Face Divine."—What of the Features? A long nose, a short nose, a blunt nose or a sharp nose. What does it indicate? Blue eyes, Grey eyes, Black eyes; Auburn Hair, Brown Hair, Black Hair, Red Hair. Cheeks, Chins, Lips with dimples in them; what do they signify? See advertisement of the **ILLUSTRATED PHRENOLOGICAL JOURNAL**, in another place. It is published at \$2 a year by

MESSRS. FOWLER & WELLS,
389 Broadway, New York,

And now is the time to subscribe for it.

Atlantic Monthly

Has elicited stronger testimonials of approval from the American press than any other magazine ever published. It continues to publish

THE BEST ESSAYS,**THE BEST STORIES,****THE BEST POEMS,**

Which American talent can furnish. Send for a circular with critical opinions. A *Specimen Number sent gratis on receipt of 25 cents.*

Subscription price \$3 a year, postage paid by the Publishers.
TICKNOR & FIELDS,

No. 135 Washington-st., Boston, Mass.

WHEELER & WILSON'S HIGHEST PREMIUM**SEWING-MACHINES.**

625 Broadway, New-York.

"There is no better family machine than this made, as we have proved by five years' use in our own family."

American Agriculturist.

\$250. SEVEN OCTAVE \$250.**ROSEWOOD PIANO-FORTES.**

GROVESTEEN & CO., 499 Broadway, N. Y.

New, enlarged Scale Piano-Fortes, with latest improvements. Thirty years' experience, with greatly increased facilities for manufacturing, enable us to sell for **CASH** at the above unusually low price. Our instruments received the highest award at the World's Fair, and for five successive years at the American Institute. Warranted five years. **Terms net Cash.** Call or send for descriptive circular.

We would invite the Public to examine J. P. HALE'S **NEW \$300 PIANO FORTES** at No. 478 Broadway, New-York. It is seldom you find such decided and substantial improvements. He has overcome all the former difficulties, which will save the country trade a vast amount of trouble and expense for repairs, which has always been a heavy tax on the public.

The Kerosene Lamp Heater Co.,

MANUFACTURERS OF

FISH'S COOKING LAMP,

with which

Water is boiled and two articles of food cooked at ONE TIME, with ONE COAL OIL BURNER, or a GAS JET, and the cost is not ONE CENT to cook a meal.

Also

FISH'S NURSING LAMP,

indispensable in nursery and sick room.

Illustrated Pamphlet furnished gratis

Address **WM. D. RUSSELL, Pres't.**
206 Pearl-st., New-York.

HOUSEKEEPERS

Remember when going to your grocer for supplies, that your interest will be better served by asking for Pyle's Saleratus, Cream Tartar, O. K. Soap and Blueing Powder.
JAMES PYLE, Manufacturer,
350 Washington-st., New-York.

Commercial Notes.

The following condensed, comprehensive tables, made up to May 14th, show the transactions the past month.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.					
RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.
25 days <i>this m'th</i>	251,000	219,000	143,000	81,100	174,000
27 days <i>last m'th</i>	209,000	156,000	285,000	7,500	126,000
SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
25 days <i>this month</i>	373,000	514,000	938,000	9,200	141,000
27 days <i>last month</i>	370,000	784,000	886,000	46,500	410,000

2. Comparison with same time last year.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days 1864	251,000	219,000	143,000	81,000	174,000	378,000
26 days 1863	317,000	540,000	596,000	45,000	51,000	410,000
SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days 1864	373,000	514,000	938,000	9,200	141,000	14,000
26 days 1863	349,000	783,000	1,839,000	102,000	91,000	1,000

3. Exports from New-York Jan. 1. to May 13.

	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1864	706,521	4,232,679	107,107	405	14,914	11,914
1863	830,493	4,163,969	2,597,612	216,978	110,759	110,759
1862	933,923	2,636,284	4,753,120	604,678	17,563	17,563

Business in breadstuffs, as well as in other kinds of domestic produce, and general merchandise, has been on a limited scale during the past month..... The receipts of flour and grain from the interior were quite limited up to the commencement of the current week, when the first considerable supplies by canal and river came to hand. The fluctuations in the premium on Gold were violent—from 89 per cent, the highest figures yet reached, down to 65 per cent—and the general tendency of the market for gold, and sterling exchange was toward a lower range. The news received this week of the success of our armies in Virginia and Georgia has served to depress the market, though the Wall-St. speculators have struggled earnestly to keep up the inflation of prices. All these circumstances have unfavorably affected the markets for produce. Sales of breadstuffs have been very moderate, for shipment and home use; flour and wheat have declined materially, closing heavily. Rye and corn have been unusually scarce, and the few lots sold from day to day, brought higher prices. Oats have been more abundant and cheaper, with rather heavier sales reported.—Government agents have been the principal buyers. Barley has been lightly dealt in,—closing with a downward tendency..... The main business in the provision line has been in hog products, as also in butter and cheese, chiefly on speculation, at extremely variable prices, the market closing generally in favor of purchasers..... Cotton has been more active and has advanced rapidly, especially within the past week.... Seed, hemp, feathers, and tobacco have been quiet at somewhat irregular prices.

THE WOOL TRADE.—A very heavy business was transacted in wool, both domestic and foreign, early in the month, at much higher rates, in view of the diminished supplies available, and the great increase in the duty on imported wools. The demand was, to a considerable extent, for manufacturing purposes, but mainly from speculative buyers. The activity of the national armies during the past fortnight, and the anticipation of an early and decisive victory have had the effect of checking operations, and, within the past week, the reported sales have been quite limited. Holders, however, are very firm, and not eager to dispose of their supplies, unless at extreme prices. It is generally thought that under the revised tariff, the imports of foreign wool will be light, and that manufacturers will have to depend mainly on the domestic product; see Current Price Table.

CURRENT WHOLESALE PRICES.

	April 15.	May 14.
Flour—Super to Extra State	\$7 30 @ 8 25	\$6 60 @ 7 40
Super to Extra Southern	8 00 @ 11 50	7 30 @ 10 50
Extra Western	8 15 @ 11 50	7 00 @ 10 50
Extra Genesee	8 30 @ 10 25	7 50 @ 9 00
Superfine Western	7 30 @ 7 50	6 45 @ 6 95
Rye Flour	5 55 @ 6 35	5 25 @ 6 75
CORN MEAL	5 75 @ 6 35	6 25 @ 6 75
WHEAT—All kinds of White	1 90 @ 2 06	1 70 @ 1 87
All kinds of Red	1 72 @ 1 90	1 52 @ 1 65
CORN—Yellow	1 34 @ 1 35	1 41 @ 1 42
Mixed	1 33 @ 1 35	1 41 @ 1 42
OATS—Western	89 @ 90	87 1/2 @ 88 1/2
State	89 @ 90	87 @ 88 1/2
RYE	1 30 @ 1 31	1 48 @ 1 50
BARLEY	1 25 @ 1 50	1 35 @ 1 50
COTTON—Middleings, per lb.	12 50 @ 79	85 @ 86
Hops, crop of 1863, per lb.	20 @ 32	18 @ 30
FEATHERS, Live Geese, p. lb.	65 @ 67	70 @ 72
SEED—Clover, per lb.	12 @ 11	11 @ 11 1/2
Timothy, per bushel	2 75 @ 3 12 1/2	2 50 @ 3 00
FLAX, per bushel	3 45 @ 3 55	3 45 @ 3 55
SUGAR—Brown, per lb.	13 1/2 @ 17 1/2	14 1/2 @ 19
MOLASSES, New-Orleans, p. gal.	85 @ 1 00	90 @ 1 00
COFFEE, Rio, per lb.	42 @ 42	43 @ 46
TOBACCO—Kentucky, &c, p. lb.	12 1/2 @ 32 1/2	12 1/2 @ 30
Seed Leaf, per lb.	18 @ 65	18 @ 65
WOOL—Domestic fleece, p. lb.	68 @ 83	70 @ 85
Domestic, pulled, per lb.	58 @ 78	62 1/2 @ 80
Wool, California, unwashed	20 @ 50	20 @ 50
TALLOW, per lb.	13 @ 13 1/2	13 1/2 @ 13 1/2
OIL CAKE, per ton	47 50 @ 57 50	50 00 @ 60 00
PORK—Mess, per bbl.	25 75 @ 25 75 1/2	28 12 1/2 @ 28 25
Prime, per bbl.	20 50 @ 23 50	24 00 @ 24 50
BEEF—Plain mess	14 00 @ 17 00	15 00 @ 18 00
LARD, in bbls., per lb.	13 1/2 @ 14 1/2	13 @ 14 1/2
BUTTER—Western, per lb.	25 @ 35	24 @ 32
SALT, per lb.	35 @ 46	35 @ 34
CHEESE	15 @ 18	14 @ 18
BEANS—per bushel	2 60 @ 3 00	2 65 @ 2 95
PEAS, Canada, per Bushel	1 15 @ 1 20	1 @ 1 18
BROOM CORN—per b.	8 @ 10	9 @ 12
EGGS—Fresh, per dozen	24 @ 25	20 @ 21
POULTRY—Fowls, per lb.	20 @ 24	15 @ 17
Turkeys, per lb.	22 @ 24	16 @ 19
PIGIONS—Wild, per doz.	3 00 @ 2 25	1 75 @ 2 00
POTATOES—Mercers, p. bbl.	3 00 @ 3 50	3 50 @ 3 75
Peach Blow, per bbl.	3 00 @ 3 25	3 50 @ 4 00
Prince Albert	2 75 @ 3 00	3 00 @ 3 25
New Bermuda, per barrel	1 50 @ 2 00	1 75 @ 2 00
TURNIPS—Ruta бага, per bbl.	7 50 @ 8 00	7 50 @ 8 00
ONIONS, Red & Yellow p. bbl.	7 50 @ 8 00	7 50 @ 8 00
DRIED APPLES, per lb.	7 1/2 @ 11	9 1/2 @ 11
DRIED PEACHES, per lb.	25 @ 25	25 @ 28
DRIED RASPBERRIES, per lb.	24 @ 25	25 @ 28
APPLES, Western, per bbl.	4 00 @ 4 50	4 00 @ 4 50
Apples, Russets, Golden p bbl.	3 00 @ 3 50	3 75 @ 4 75
CRANBERRIES, per bbl.	12 00 @ 18 00	8 00 @ 14 00

KIRBY'S MOWER, CLIPPER and COMBINED MOWER and REAPER with all the improvements for 1864. Sold by **GRIFFING BROTHER & CO.,** 60 Courtlandt-st., New-York.

SUPERIOR FARM LAND.—20,000 Acres at low prices and accommodating terms.—Franklinville and Lake Tract, Gloucester County, New Jersey, 25 miles south of Philadelphia on Railroad running from Philadelphia and Camden to Cape May. In lots to suit purchasers. Circulars with reports of Solon Robinson, Hon. Wm. Parry, and others, with full information, sent free by addressing JOHN H. COFFIN & CO. or WILLIAM ARBOTT, Franklinville, New Jersey. Also improved farms from 20 Acres upward.

To Settlers Seeking Location on MARYLAND FARMS.

2,800 Acres in 7 farms all adjoining, located in Charles County, 18 miles from Washington City. Upon each farm are good dwellings and out-buildings, the land is of clay loam and very productive in Tobacco and Fruit, price in the aggregate, \$28 per acre. For a healthy and profitable settlement with choice of neighbors this offers the best of inducements. For sale by R. W. TEMPLEMAN & CO., Baltimore City, Maryland.

THE BEST BOOK TO KEEP, OR TO SELL.—Agents and Newsmen will find a ready sale for **HOW TO WRITE, TALK, & HOW TO BEHAVE**, and **HOW TO DO BUSINESS**. Complete in one large gilt volume. Sent by first post, for \$2. Agents wanted! Please address FOWLER & WELLS, No. 389 Broadway, New-York.

Books for Farmers and Others.

[Any of the following books can be obtained at the Office of the *Agriculturist* at the prices named, or they will be forwarded by mail, post-paid, on receipt of the price. All of these books may be procured in making up a library. We indicate our opinion of their value by one or more Stars.]

American Bird Fancier	\$0 25
American Farmer's Encyclopedia	5 00
American Weeds and Useful Plants	1 50
Allen on the Culture of the Grape	1 00
Allen's (R. L.) American Farm Book	1 00
Allen's Diseases of Domestic Animals	75
Allen's (L. F.) Rural Architecture	1 25
Barry's Fruit Garden	1 50
Bement's Poultryman's Companion	2 00
Bridgeman's Fruit Cultivator's Manual	60
Bridgeman's Young Gardener's Assistant	1 50
Bridgeman's Kitchen Garden Instructor	60
Bridgeman's Florist's Guide	60
Brandt's Age of Horses (English and German)	1 50
Breck's Book of Flowers	1 25
Brown's American Poultry Yard	1 25
Buist's American Flower Garden Directory	1 25
Buist's Family Kitchen Gardener	75
Burr's Vegetables of America	4 50
Chorlton's Grape Grower's Guide	75
Cole's (S. W.) American Fruit Book	75
Cole's Veterinarian	75
Dadd's (Geo. H.) Modern Horse Doctor	1 25
Dadd's (Geo. H.) American Cattle Doctor	1 25
Dana's Muck Manual for Farmers	2 50
Downing's Cottage Residences	2 00
Downing's Fruits and Fruit Trees of America	2 00
Eastwood on the Cranberry	50
Employment of Women—By Virginia Penny	1 50
Every Lady her own Flower Gardener	25
Fessenden's American Kitchen Gardener	25
French's Farm Drainage	1 25
Field's (Thomas W.) Pear Culture	1 00
Fish Culture	1 00
Flint (Charles L.) on Grasses	2 00
Flint's Milch Cows and Dairy Farming	2 00
Fuller's Strawberry Culturist	15
Fuller's Grape Culturist	1 25
Goodale's Principles of Breeding	1 00
Gray's Manual of Botany and Lessons in one Vol.	1 00
Gray's How Plants Grow	1 00
Gueon on Milch Cows	60
Hall's (Miss) American Cookery	1 25
Harashty Grape Culture &c.	5 00
Harsh's Insects Injurious to Vegetation, plain	4 50
do. do. colored plates	1 25
Herbert's Hints to Horsekeepers	1 25
Johnson on M'nares	1 00
Kemp's Landscape Gardening	2 00
Langstroth on the Honey Bee	1 50
Loudon's (Downing's) Ladies' Flower Garden	1 50
Leach's How to Build Hot-houses	1 25
Liebig's Lectures on Chemistry	50
Linsley's (D. C.) Morgan Horses	1 25
Manual of Agriculture by G. Emerson and C. L. Flint	1 00
Mayhew's Illustrated Horse Doctor	3 50
Mayhew's Illustrated Horse Management	3 50
McMahon's American Gardener	25
Milburn on the Cow and Dairy	25
Miles on the Horse's foot	50
Mistakes of Educated Men	1 50
My Farm at Edgewood	1 50
National Almanac and Annual Record	1 50
Norton's Scientific Agriculture	75
Our Farm of Four Acres. (paper 30c.) bound	50
Onion Culture	20
Parsons on Strawberry Culture	75
Parsons on the Rose	1 25
Pedder's Farmer's Land Measurer	50
Phantom Bouquet, or Skeleton Leaves	1 00
Plum's Grape Culture	1 25
Quincy's Mysteries of Bee Keeping	1 25
Randall's Fine Wool Sheep Husbandry	1 25
Rand's Flowers for Parlor and Garden	2 50
Richardson on the Dog	50
Richardson on the Hog	25
Robins' Produce and Ready Reckoner	50
Skiffull Housewife	60
Smith's Landscape Gardening	1 25
Spencer's Education of Children	1 25
Stewart's (John) Stable Book	1 25
Ten Acres Enough	1 25
Tobacco Culture	1 25
Todd's (S. E.) Young Farmer's Manual	1 25
Tucker's Register Rural Affairs	25
Turner's Cotton Planter's Manual	1 25
Watson's American Home Garden	2 00
Yale College Agricultural Lectures	1 25
Yonatt and Spooner on the Horse	1 25
Yonatt and Martin on Cattle	1 25
Yonatt on the Hog	75
Yonatt on Sheep	75
Yomans' Chemistry	1 25
Yomans' Household Science	1 50

THE INDISPENSABLE NEW HAND BOOK.

HOW TO WRITE, HOW TO TALK, HOW TO BEHAVE, HOW TO DO BUSINESS. In one handsome volume of 600 pages, 15mo. Sent by first post, for \$2. Agents wanted. Please address all orders to FOWLER & WELLS, No. 389 Broadway, New-York.

Woods Botanical Series.

These standard text books have been re-written throughout, and are now the most complete, practical and popular before the public. THE ANNUAL SALE IS LARGER THAN THAT OF ALL OTHERS COMBINED. WOOD'S OBJECT LESSONS IN BOTANY, \$1.25. WOOD'S NEW CLASS BOOK OF BOTANY \$3.00. The OLD CLASS BOOK for so many years the standard in its department is still published. Price \$2. BARNES & BURR, Educational Publisher, 51, 53 & 55 John-st., New York.

A NEW BOOK ON THE RIFLE. D. APPLETON & CO., Nos. 443 and 445 Broadway, New-York, HAVE JUST PUBLISHED

HINTS TO RIFLEMEN,

By H. W. S. CLEVELAND, Vol. 12mo, cloth. Illustrated with Numerous Engravings. Price \$1 50.

This volume has been prepared by the author of the recent articles in the *Atlantic Monthly* on "The Use of the Rifle," in order to meet a demand which has been growing since the commencement of the war. The only recent American works on the subject are technical and scientific, or adapted solely to military readers, and the best foreign works are not calculated to meet the present wants. A very large number of new guns have appeared lately, the comparative merits of which few persons have an opportunity of testing. At the same time the number has very largely increased of those who are impressed with the importance of making themselves familiar with the use of firearms, and who are at a loss to select from the number offered for sale.

This volume contains an explanation of the principles upon which the best performance depends, so that any one may judge for himself how far they are adhered to in any case. Accurate descriptions of the best firearms and statements of their capacity are also given, with more than 20 engravings. The whole subject is presented in such a manner as to prove interesting to the general reader. Sent free by mail on receipt of price.

"THE HUMAN FACE DIVINE,"

A new System of Physiognomy, Eyes, Ears, Nose, Lips, Mouth, Head, Hair, Eyebrows, Hands, Feet, Skin, Complexion, with all "Signs of Character, and How to Read Them," in

The Phrenological Journal And Life Illustrated, S. R. WELLS, Editor.

ETHNOLOGY, the Natural History of Man, nations, races, and tribes of men, described with Illustrations. **PHYSIOLOGY**, functions of the Body, Heart, Lungs, Stomach, Bones, Muscles, Nervous System—their "Uses and Abuses."

PHRENOLOGY, the Temperaments, and Man's Intellectual, Social and Moral Nature, and How to Improve It. Also Choice of Pursuits.

PHYSIOGNOMY, with the "SIGNS OF CHARACTER, AND HOW TO READ THEM," on scientific principles. **PSYCHOLOGY**, or the "Science of the Soul," Man's relations not only to this life, but the life to come, explained on principles in perfect harmony with Revelation and Christianity.

A new volume, the 40th, commences this JUNE, 1864. Published monthly, in quarto form, at \$2.00 a year. Samples, by first post, only 20 cents. Please address FOWLER & WELLS, 389 Broadway, New-York.

MME. DEMOREST'S MIRROR OF FASHIONS.

A brilliant display of beautiful novelties, music, elegant fashion plates, seven Full Size Patterns, an elegant Braid Sheet, with much valuable information, only 25 cents; or yearly subscription \$1, with a premium of One Dollar's worth of Extra Patterns. Do not fail to subscribe immediately. Summer Number now ready.

(Form of an Order.) Mme. Demorest will send enclosed \$1.00, and 2 cents, for postage on the premium, for which please send me your Mirror of Fashions for one year, commencing with the Summer No. Address MME. DEMOREST, 433 Broadway, New-York.

Be Merry and Wise.

ALL THE GIRLS AND BOYS

Like MERRY'S MUSEUM, their oldest and best Magazine. Vol. XLVIII commences July 1st. Filled with Stories, Pictures, History, Instructive Articles, Puzzles by Aunt Sue, &c., &c. PRIZES MONTHLY FOR SOLVING PROBLEMS. Beautiful Gold Merry Badge for Premium. Fine Steel engraved Portrait of Hiram Hatchet in Jan. No., \$1 a year. Single copies 10 cents. Address J. N. STARNES, 111 Fulton-st., New-York City.

"INDISPENSABLE." No Correspondent, Gentleman, Lady, Public Speaker, Teacher, nor Man of Business, should be without this New Hand-Book. **HOW TO WRITE, HOW TO TALK, HOW TO BEHAVE, AND HOW TO DO BUSINESS.** A handy volume of 600 pages, for ready reference. Sent by first post, for \$2. Agents wanted. Please address FOWLER & WELLS, 389 Broadway, New-York.

TEN ACRES ENOUGH,

OR,

HOW A SMALL FARM MAY BE MADE TO SUPPORT A LARGE FAMILY.

1 vol. 12mo, paper, \$1 00; cloth, \$1 25.

For sale by Booksellers and Newsdealers generally, or mailed free, on receipt of price, by JAMES MILLER, Publisher, 522 Broadway, New-York.

DEMOREST'S NEW YORK ILLUSTRATED NEWS.—The live, spicy and most brilliantly illustrated paper in the world. Yearly, \$4.00, with Mme. Demorest's Mirror of Fashions as a premium. Single copies 10 cents, mailed free on receipt of price, at No. 39 Beekman Street, New-York.

SOMETHING TO DO.—"PLEASANT AND PROFITABLE." Good Books, ready sales, and good profits. Agents wanted. Address with pre-paid envelope for answer, FOWLER & WELLS, 389 Broadway, New-York.

NOW READY—PRICE 75 CENTS.

PEOPLE'S EDITION OF

PARTON'S

General Butler in New Orleans.

One volume, octavo, paper, price 75 cents.

With the view of meeting the extensive popular demand for this remarkable book, this edition has been prepared. The page and type are similar to those of *Harper's Magazine*. Some of the less important documents are omitted, and in some instances the account has been condensed, yet never so as to interfere with the interest or completeness of the story.

Unquestionably this book stands pre-eminent in interest among all yet occasioned by the rebellion. Its subject and author combine to render it fascinating. Fifteen editions have been called for as fast as they could be printed. It has been most warmly commended by the loyal press of the country, and scarcely less so by a portion at least of the English press, by whom it is acknowledged to be a complete vindication of Gen. Butler from the malicious charges which envy and hatred have brought against him.

It contains an anecdotal sketch of Gen. Butler's brilliant and remarkable career at the bar of Massachusetts; a history of the secret movements in the Charleston Convention; conversations between Gen. Butler and the leading secessionists at Washington in December, 1860; the real plans of the traitors; Gen. Butler invited to join them; his advice to Buchanan; his efforts in preparing Massachusetts for war; the celebrated march, via Annapolis, to Washington; his night march to Baltimore; collision with Gen. Scott; his course at Fortress Monroe; the history of the *contrabands*; his advice to the Administration how to take Richmond; the truth about the battle of Great Bethel; the Hatteras Expedition; THE SECRET HISTORY OF THE NEW ORLEANS EXPEDITION; the adventures of the General in getting to Ship Island; A FULL ACCOUNT OF THE CAPTURE OF NEW ORLEANS; the landing of the troops in the city; A COMPLETE NARRATIVE OF SUCCEEDING EVENTS, with a large number of highly interesting narratives and anecdotes never before published; the recall of General Butler, and the explanation given of it by the Government; his present opinions upon the great issues before us.

Edition in large type, crown, 8vo., cloth, 662 pages, price \$2.50. People's Edition, 8vo., paper, 75 cents. German Edition \$1.00.—Sent by mail on receipt of price.

For sale by MASON & HAMLIN, Boston, and by all Booksellers. Published by MASON BROTHERS, 7 Mercer-st., New-York.

Other Works by Mr. Parton.

Life of Jackson.—A Life of Andrew Jackson, President of the United States. 3 vols. crown octavo, 636, 672, and 734 pages, with Portraits on Steel.

Cloth, extra, price.....\$7 50
In half calf, extra.....12 00

A life indeed, and before which the conventional and common place biographies of modern times sink into stupidity and insignificance.—*N. Y. Journal of Commerce*. A fresher, livelier account was never written of any hero by any author.—*Boston Journal*. Possesses a degree of interest which can scarcely be overestimated.—*N. Y. World*. A work of impartial, accurate history which, from the remarkable character of its hero, is more captivating and exciting than any novel.—*Eastern Argus*. One of the most readable of books. Every page is alive.—*Horne Journal*.

Life of Aaron Burr.—The Life and Times of Aaron Burr, Lieut. Col. in the Army of the Revolution, United States Senator, Third Vice-President of the United States, etc. *Seventeenth Edition*, revised and enlarged. 2 vols. crown octavo, with Portraits on Steel.

Cloth, extra, price.....\$4 00
In half calf, extra.....7 00

Doubtless the most successful biography ever published in America.—*Harper's Weekly*. One of the very best specimens of historical biography with which we are acquainted.—*Scottish Amer. Magazine*. Ought to be read by every American who would know the history of his country.—*North American Review*. In style, arrangement, and honesty of purpose, the finest work of its class, without a shadow of reservation, to be found in the whole range of American literature.—*Mrs. Stephens' Magazine*. A story more exciting than romance.—*N. Y. Evangelist*.

Life of Benjamin Franklin.—It is believed to be the most elaborate and interesting account yet given to the world, of this great and favorite American. 2 vols. crown octavo, with Portraits on Steel.

Cloth extra, price.....\$5 00
In half calf, extra.....7 00

Before Mr. Parton commenced the preparation of his "General Butler in New Orleans," he had already spent more than two years upon this Life of Franklin, having brought it near completion.

MASON BROTHERS, } MASON & HAMLIN,
7 Mercer-st., New-York. } 274 Washington-st., Boston.

NEW AND POPULAR MUSIC, with other valuable novelties, in DEMOREST'S N. Y. ILLUSTRATED NEWS, Universally acknowledged the most spicy, interesting and popular Illustrated Weekly now published. Price 10 cents. Sold everywhere.

ME. DEMOREST'S MIRROR OF FASHIONS. The splendid Summer number, with elegant illustrations, New Music, Beautiful Braid and Embroidery, and Seven Full-Sized Patterns now ready.

For One Dollar!

200 ENVELOPES and **120 SHEETS OF NOTE PAPER** will be sent by mail, post-paid, to any address. There is no cheaper way to get the same quantity, and many Soldiers are daily ordering the packages. Suppose you try a package. You will be sure to be satisfied and send again when you wish for more. Address

CLAREMONT MANUFACTURING CO.,
Claremont, N. H.

HOME MADE BEER!

BREWER'S COMPOUND FLUID EXTRACT
OF
DANDELION.

ONLY 25 CENTS A BOTTLE!

Makes SIX GALLONS OF THIRTY BOTTLES of delicious, healthful, strengthening Root Beer.

Prepared by H. & J. BIRKBECK, Springfield, Mass.
Sold by Druggists and Grocers throughout the country.

Morris' Concentrated Lemonade.

Price \$3.50 per doz., in cases of 2 doz.

See pages 71 and 93 March Agriculturist.

WM. H. MORRIS, Wholesale Agent,
151 Nassau-Street, New-York.

HORN'S PATENT CLOTHES WASHER.—This Machine washes by a squeeze or pressure. It will wash a small collar or a large bed quilt equally well. A girl of 12 years old can work it with ease.

Agents wanted in every township to sell Machines, and Town and County rights to manufacture. Send for circular and terms to Agents
GRIFFING BROTHER & CO.,
60 Courtland-st., New-York.

GROVER & BAKER'S



HIGHEST PREMIUM ELASTIC STITCH SEWING MACHINES.

"Grover & Baker's are the best."—Am. Agriculturist.
495 Broadway, New-York.

D. BARNUM'S "SELF SEWER."

FOR ALL SEWING MACHINES.

PRESERVES THE EYES, AVOIDS BENDING, guides the work itself, NO BASTING. Referred to, with favorable notices by the Scientific American, Tribune, Times, Christian Advocate and Journal, and other N. Y. Papers, at the late Great Fair. For sale, for ALL machines, at the inventors' headquarters, Willcox & Gibbs' Sewing Machine Office, 508 Broadway, N. Y. Price \$1.50 with directions. Sent by mail, free.

D. BARNUM, Inventor.

T. B. BYNNER,

IMPORTER AND DEALER IN
WATCHES AND JEWELRY.

Also, Agent for the
AMERICAN WATCH,

In superior styles and quality of Cases.
Orders, large or small, promptly and faithfully attended.
No. 175 Broadway,
New-York.

AGENTS

WANTED EVERYWHERE TO SELL WOODRUFF'S PATENT
PORTABLE BAROMETERS.

CHARLES WILDER, Peterboro', N. H.

100 NEW and Second Hand Pianos, Melodeons, Alexandres and Cabinet Organs, for sale at low prices. Monthly payments received for the same. Second-hand Pianos at great bargains for cash prices, from \$60 to \$200. New 7 octave Pianos at \$225, \$250, \$275, \$300, and up to \$700. 10,000 sheets of Music a little soiled, at 1 cent per page. One of the largest stocks of Sheet Music and Music Books in the U. S. HORACE WATERS, No. 481 Broadway, N. Y.

The Wonderful



Patent

CANTERING HORSES.

Propelled by the weight of the rider. Sizes for Children from two to eighteen years old, \$8 to \$22 each. Extra finish, \$16 to \$33 each. For adults, from \$30 to \$70 each.

I make one size suitable for large boys and girls to go to school or any distance on, and for a Ladies' exercising horse, price plain, \$22, extra finish, \$33.

They are worth the Money,

and where there are children, they pay a

Daily dividend of ten per cent.

in health and amusement.

There is no such thing as a child getting tired of it, for the horse is always ready to GO. Young folks and old folks are invited to take a RIDE at this free school of Equestrianism, or to send stamp for circular, giving full particulars and prices.

INVALID TRAVELLING CHAIRS

with 2 large side wheels and back-swivel wheel, propelled by the hands. Prices according to finish, \$13, \$30, and \$50 each. These are suitable for house, hospital or for use in the street.

See Editorial notice in American Agriculturist of January 1864, page 7.

STEPHEN W. SMITH,
498 Broadway, New-York.

Life Insurance.

MANHATTAN LIFE INS. CO.

No. 31 NASSAU STREET,—after Jan. 1, 1865,
No. 156 & 158 BROADWAY,

(Opposite the Post Office,) NEW YORK.

Cash Capital and Accumulation, over \$1,700,000
Claims Paid, 900,000
Dividends to Policy Holders, 700,000

This Company has the following advantages over others:
It is a Stock and Mutual combined—giving safety of management and large profits to the insured. Dividends seven-eighths of profits every three years.

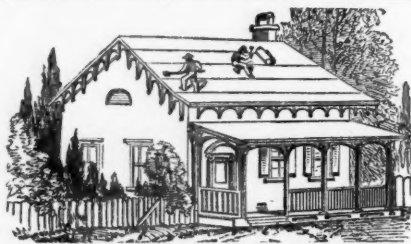
Dividends can be used to increase the amount Insured or pay Premiums. Policies in force for five years are incontestable on ground of error in the application, except as to age.

Premiums may be paid annually, semi-annually, or quarterly when the policy is for life and the annual premium amounts to \$40 or over. From forty to fifty per cent. may be paid by notes.

Persons Insured may visit Europe in first-class vessels, without extra charge, at all seasons of the year.

Agencies for this Company are established in all the principal cities, where application can be made for all necessary information.

HENRY STOKES, Pres't.
C. Y. WEMPLE, Secretary, J. L. HALSEY, Asst Secretary,
S. N. STEBBINS, Actuary, ABRAHAM DUBOIS, M.D., Med. Ex.



GUTTA PERCHA CEMENT ROOFING

Is Fire and Waterproof, and can be applied by any laborer. It costs about one-third as much as tin, and is more durable.

GUTTA PERCHA CEMENT PAINT

As applied to leaky roofs of all kinds, will render them perfectly water-tight. It is put up ready prepared for use. This paint is particularly adapted for painting Out-houses, Barns, Fences, &c., &c.

These materials have been tested on more than twelve thousand roofs during the past six years.

Full descriptive particulars furnished by the
JONES & CROSBY MANUFACTURING CO.
(Sole Manufacturers,) 78 William-st., New-York.

\$1000 FORFEITURE.



This Roofing is simply a neat and inexpensive method of doing what has been known to

Endure 50 Years,

On Decks, Coaches, &c. The expense being so reduced by this improvement as to make it the most economical covering for

Roofs, Decks, Gutters, &c.

And is pronounced the best yet devised, by the first mechanics and architects in the country.

NORTH BRIDGEWATER, May 3, 1861.

R. D. WASHBURN.—Dear Sir: The cement not only absorbs oil (as the cloth is painted over), but forms the best and most enduring paint known. I have tested this roofing for eight years. I have applied it over wood, metal and stone, and in the most exposed and trying places, and all these applications to this day good proofs of the endurance and value of my method, and I will forfeit to you one Thousand Dollars (\$1000) for a single real authenticated case of failure in a roof covered by my method.

Respectfully yours JOHN W. KINGMAN.

No RIGHTS ARE FOR SALE. RESPONSIBLE AGENTS are wanted throughout the country. For cement with full directions which will enable any painter to apply, or further information address

B. D. WASHBURN, Proprietor,
Box 4214, Boston P. O., Mass.

Samples of the Roofing and Cement may be seen at the office of the American Agriculturist.

1864. RATS. ROACHES, &c. 1864.

As Spring approaches
ANTS and ROACHES
From their holes come out:
And MICE and RATS,
In spite of CATS,
Daily skip about.



For Rats, Mice, Roaches, Ants, Bed Bugs, Moths in Furs, Woolens, &c., Insects on Plants, Fowls, Animals, &c.

Put up in 25c, 50c, and \$1.00 Boxes, Bottles and Flasks. \$2 and \$5 sizes for HOTELS, PUBLIC INSTITUTIONS, &c.

"Only infallible remedies known."

"Free from Poisons."

"Not dangerous to the Human Family."

"Rats come out of their holes to die."

Sold Wholesale in all large cities.

Sold by all Druggists, and Retailers everywhere.

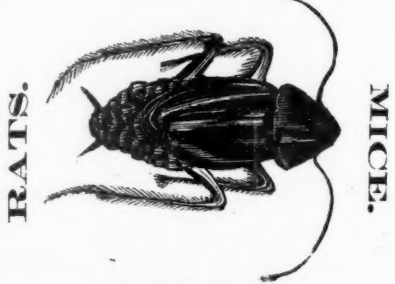
BEWARE! of all worthless imitations.

See that "COSTAR'S" name is on each Box, Bottle, and

Flask, before you buy.

Address HENRY R. COSTAR.

PRINCIPAL DEPOT 482 Broadway, N. Y.



GENUINE PERSIAN INSECT POWDER.

For destroying Ticks on Sheep, Lice on Chickens, Fleas on Dogs, Ants, Bedbugs, and all other insects. It is not poisonous to the skin of man or beast. Also

FOR RATS, MICE and COCKROACHES.

The Phosphoric Paste, recommended by the Editor of the American Agriculturist, as a driver away of Rats and Mice, was obtained of the subscriber, who puts it up for sale Wholesale and Retail.

A. ISAACSEN,
40 Fulton-st., New-York City.

Italian Queen Bees.

For sale by L. L. LANGSTROTH & SON, Oxford, O.

Italian Queen Bees.

From the Apiary of Dzierzon, which, at the last European Bee Convention, was unanimously declared to be the ONLY apiary in Europe from which RELIABLY PURE stock could be obtained. As I have an entire apiary of this stock, bred carefully for upward of four years, and shall TEST and GUARANTEE the PURITY, FERTILITY and safe delivery of queens, when sold, purchasers may RELY upon them.

A limited number of these Queens will be supplied this season at \$10 each. Orders will be filled in strict rotation with their reception. Circulars sent on receipt of a 2 cent stamp.

RICHARD COLVIN, Baltimore, Md.

UNIVERSAL CLOTHES WRINGER.

—WITH—



WARRANTED:
53,818 SOLD IN 1863.

Washer, Wringer,
AND

STARCHER COMBINED!
Silver and Bronze Medals, Diplomas, Certificates, Premiums, and Testimonials, have been received from various sources, both Public and Private.

How Long will it Last!

LETTER FROM MRS. HENRY WARD BEECHER, IN 1861.
I am most happy to speak in the very highest terms of the Universal Clothes Wringer. The hardest part of "washing-day" work is, in my opinion, the wringing; and the inventor of this machine may have the satisfaction of feeling that he has changed one of the most toilsome parts of woman's work into a very attractive amusement. The laundress looks upon it as a great blessing. I could hardly express my approbation of them more highly than I have by ordering one in these hard times, for my daughter. I look upon it as among the most useful articles in her house.

Mrs. HENRY WARD BEECHER.

Brooklyn, Oct., 1861.

IN 1864.

After a constant use of the Universal Clothes Wringer, for more than four years, in my family, I am authorized by the "powers that be" to give it the most unqualified praise, and to pronounce it an indispensable part of the machinery of housekeeping. Our servants have always been willing to use it, and always have liked it.

Brooklyn, Jan. 23, 1864.

HENRY WARD BEECHER.

FROM LOVEJOY'S HOTEL, NEW YORK.

The Universal Clothes Wringer is the first Wringer that I have found that would stand the service required of it. I had already "used up" one or more of every other kind I could get. The rolls of all would twist and work loose after a short time using, and, of course, became worthless.

We have run the "Universal constantly" for about twenty months and it is still in active service.

New York, Feb., 1864.

J. P. HUGGINS.

LETTER FROM ORANGE JUDD, ESQ.

GENTLEMEN:—You request my views with regard to the Universal Clothes Wringer. In reply, I hand you below what I said in my paper, some two years ago, adding, that since that time my wife and servants have become more and more attached to the Wringer. They would as soon think of washing without a tub as without it.

Very respectfully,

New York, Feb., 1864.

ORANGE JUDD.

From the American Agriculturist.

"From several years' experience with it in our own family; from the testimony of hundreds who have used it; and from the construction of the implement itself—we feel certain that it is worthy a place in every family. A child can readily wring out a tubful of clothes in a few minutes. It is, in reality, a Clothes Saver! a Time Saver! and a Strength Saver! We think the machine more than pays for itself every year in the saving of garments! There are several kinds, nearly alike in general construction; but we consider it important that the Wringer be fitted with Cogs, otherwise a mass of garments may clog the rollers, and the rollers upon the crank-shaft slip, and tear the clothes. Our own is one of the first made, and it is as good as new, after nearly Four Years' constant use."

We have eight sizes, from \$5.50 to \$33. The ordinary family sizes are No. 1, \$10, and No. 2, \$7. These have

COG-WHEELS.

Our cheap sizes (No. 2½ and 3) have small rolls which do not admit of COGS. All others are Warranted in every particular.

This means, especially, that after a few months' use, the lower roll

Will not Twist on the Shaft.

On receipt of the price, from places where no one is selling, we will send the U. C. W., FREE OF EXPENSE. What we especially want is a good

CANVASSER

in every town. We offer liberal inducements, and guarantee the exclusive sale.

R. C. BROWNING, Agent,
347 Broadway, New-York.

AMALGAM BELLS.

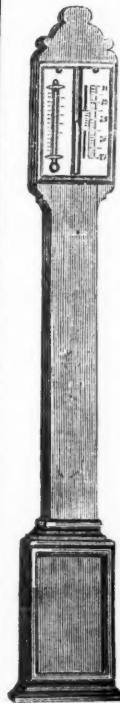
Amalgam Bells,
At prices within the reach of every Church, School, Cemetery, Factory, or Farm in the land. Their use throughout the United States and Canada for the past six years has proven them to combine most valuable qualities, among which are TONE, STRENGTH, SONOROUSNESS, and DURABILITY OF VIBRATION, unequalled by any other manufacture. Sizes from 50 to 5000 lbs., costing two THIRDS LESS than other metal, or 15 cents per pound, at which price we warrant them twelve months. Old bell metal taken in exchange, or bought for cash. Send for a Circular to the Manufacturer.

JOHN B. ROBINSON,
No. 190 William-street, New-York.

AMALGAM BELLS.

Woodruff's Patent Portable BAROMETER.

No. 1
Price \$15.



It will not be necessary to point out to the readers of the Agriculturist the merits of this valuable instrument. Having enlarged our facilities for manufacturing we are enabled to meet promptly the very rapidly increasing demand for these Barometers at a small advance upon former prices. Circulars giving full particulars sent free on application by mail. Instances have occurred, where farmers have saved hundreds of dollars annually by its use, often more than its cost in a single instance, and scientific men have estimated a total saving of FIVE PER CENT. on all crops by the use of a reliable Barometer to foretell impending changes in the weather.

Four years' experience has incontestably proved this to be the most reliable, durable, cheapest, and only PORTABLE BAROMETER. Independently of its practical value, it is well worth its cost as an ornamental article of furniture.

"We recommend it above all others for general use."

—American Agriculturist.
"It is really a good, practical portable Barometer."—Scientific American.

"You ought to sell ten thousand of them this present year to the farmers of New-York alone."

HORACE GREELEY.

"Were we a farmer we would pay \$100 for a Barometer rather than not have one, or curtail food and clothing till we could buy one. Mr. Wilder's are the best in the market, and very cheap."—Mother's Journal.

"I would not be without mine for \$100."—ORANGE JUDD.

AGENTS WANTED EVERYWHERE.

Thermometers of all kinds and sizes and of superior accuracy and finish constantly on hand.

Send Stamp for Circulars.

CHARLES WILDER, Peterboro, N. H.

THE NONPAREIL WASHING MACHINE

Has been before the public for three years, and is the only entirely reliable machine in existence. It is a squeezing machine, operated by a balance-wheel and crank, and possesses the only means by which speed and power can be obtained with little labor. It is constructed on strictly mechanical principles; is simple, strongly made in all its parts, not liable to get out of order, will not injure the finest clothing, and saves two-thirds the labor and time required in hand-washing. It is intended to be of permanent utility in the household, taking rank with the Sewing Machine, is not got up with the view of selling State or County rights; and in order to insure completeness of construction in keeping with its superior merits in other respects, it is manufactured only by the subscribers.—Manufacturing rights are not for sale. The Nonpareil has been in constant use in the family of Mr. Judd, the proprietor of this Journal, and in that of Mr. Munn, proprietor of the Scientific American, since 1861.

Prices—No. 1, \$14; No. 2, \$18; No. 3, \$22.

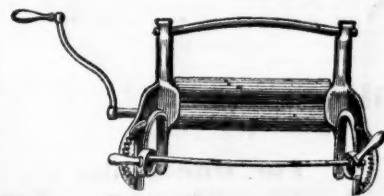
No. 2 and No. 3 Machines, geared to run three turns of the crank to one turn of the hand (150 and 50 turns a minute), \$3 additional. Power Machines, for Hospital and Hotel purposes, with Wringers and Counter-shafting complete, \$100, \$125, and \$300 each.

Send for free Circular to

OAKLEY & KEATING, 134 Water-street, New-York.

STAMMERING.

And Stuttering cured by Bates's Patent Scientific Appliances. For (new edition of) Pamphlets and Drawings describing the same, address H. C. L. MEARS, 277 West 23d Street, N. Y.



Putnam Clothes Wringer!

IT IS THE ONLY RELIABLE
SELF-ADJUSTING WRINGER.

NO WOOD-WORK TO SWELL OR SPLIT.

NO THUMB-SCREWS TO GET OUT OF ORDER.

WARRANTED WITH OR WITHOUT COG-WHEELS

It took the FIRST PREMIUM at Fifty-seven State and County Fairs in 1863, and is, without an exception, the best Wringer ever made.

Patented in the United States, England, Canada, and Australia. Agents wanted in every town and in all parts of the world.

No. 1, \$6 50. No. A, \$8 50.

Manufactured and sold, wholesale and retail, by the

Putnam Manufacturing Company,

NO. 13 PLATT STREET, NEW YORK,

—AND—

CLEVELAND, OHIO.

S. C. NORTHROP, Agent.

WHAT EVERYBODY KNOWS, VIZ:

That Iron well galvanized WILL NOT RUST;
That a simple machine is BETTER than a complicated one;
That a WRINGER SHOULD BE SELF-ADJUSTING, DURABLE, and EFFICIENT;

That Thumb Screws and Fastenings cause DELAY and TROUBLE to regulate and keep in order;
That wood soaked in hot water WILL swell, shrink and split;

That wood bearings for the shaft to run in WILL wear out;

That the PUTNAM WRINGER, with or without Cog-wheels, WILL NOT TEAR the clothes;

That Cog-wheel regulators ARE NOT ESSENTIAL;

That the PUTNAM WRINGER has all the advantages, and not one of the disadvantages above-named;

That all who have tested it, pronounce it the best Wringer ever yet made;

That it will wring a Thread or a Bad Quilt WITHOUT ALTERATION.

GREAT DISCOVERY! USEFUL and VALUABLE DISCOVERY!

HILTON'S INSOLUBLE CEMENT!

Is of more general practical utility than any invention now before the public. It has been thoroughly tested during the last two years by practical men, and pronounced by all to

Be Superior to any
Adhesive Preparation known.

Hilton's Insoluble Cement

Is a new thing, and the result of years of study; its combination is on

SCIENTIFIC PRINCIPLES,
And under no circumstances or change of temperature, will it become corrupt or emit any offensive smell.

Boot and Shoe Manufacturers, using Machines, will find it the best article known for Cementing the Channels, as it works without delay, is not affected by any change of temperature.

Jewellers will find it sufficiently adhesive for their use, as has been proved.

It is especially adapted to Leather, and we claim as an especial merit, that it sticks patches and Linings to Boots and Shoes sufficiently strong without stitching.

IT IS THE ONLY

LIQUID CEMENT

Extant, that is a sure thing for mending Furniture, Crockery, Toys, Bone Ivory, and articles of Household use.

REMEMBER

Hilton's Insoluble Cement
Is in liquid form and as easily applied as paste.

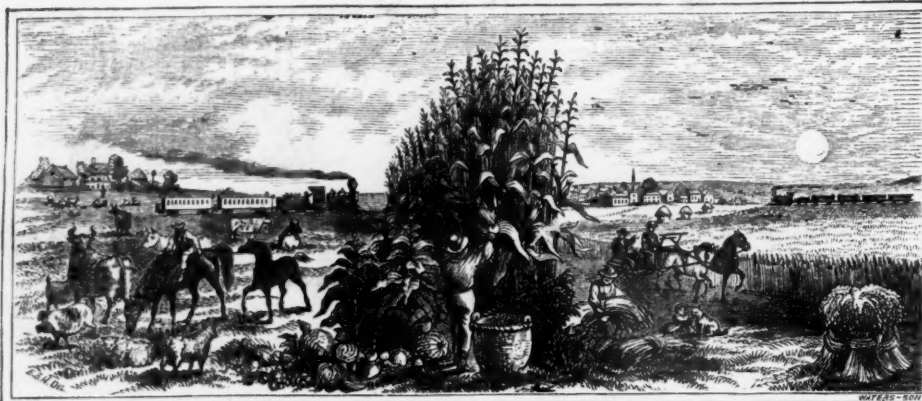
Hilton's Insoluble Cement
Is insoluble in water or oil.

Hilton's Insoluble Cement
Adheres to oily substances.

Supplied in Family or Manufacturers' Pack ages from 2 ounces to 100 lbs.

HILTON BROS. & CO.,

PROPRIETORS,
PROVIDENCE, R. I.



ILLINOIS CENTRAL RAILROAD COMPANY

OFFER FOR SALE

1,000,000 Acres of SUPERIOR FARMING LANDS, IN FARMS OF

40, 80 & 160 acres and upwards, at from \$8 to \$12 per acre.

THESE LANDS ARE

NOT SURPASSED BY ANY IN THE WORLD.

THEY LIE ALONG

THE WHOLE LINE OF THE CENTRAL ILLINOIS RAILROAD.

For Sale on LONG CREDIT, SHORT CREDIT and for CASH, they are situated near TOWNS, VILLAGES, SCHOOLS and CHURCHES.

FOR ALL PURPOSES OF AGRICULTURE.

The lands offered for sale by the Illinois Central Railroad Company are equal to any in the world. A healthy climate, a rich soil and railroads to convey to market the fullness of the earth—all combine to place in the hands of the enterprising working man the means of independence.

ILLINOIS.

Extending 300 miles from North to South, has all the diversity of climate to be found between Massachusetts and Virginia, and varieties of soil adapted to the products of New England and those of the Middle States. The black soil in the central portions of the State is the richest known, and produces the finest corn, wheat, sorghum and hay, which latter crop, during the past year, has been highly remunerative. The seeding of these prairie lands to tame grasses, for pasturage, offers to farmers with capital the most profitable results. The smaller prairies, interspersed with timber, in the more southern portion of the State, produce the best of winter wheat, tobacco, flax, hemp and fruit. The lands still further South are heavily timbered, and here the raising of fruit, tobacco, cotton and the manufacture of lumber, yield large returns. The *breadth* of Illinois is hardly surpassed by any State in the Union.

GRAIN AND STOCK RAISING.

In the list of corn and wheat producing States, Illinois stands pre-eminently first. Its advantages for raising cattle and hogs are too well-known to require comment here. For sheep raising, the lands in every part of the State are well adapted, and Illinois can now boast of many of the largest flocks in the country. No branch in industry offers greater inducements for investment.

PRICES AND TERMS OF PAYMENT.

The price of land varies from \$7 to \$12 and upward per acre, and they are sold on long credit, on short credit, or for cash. A deduction of *ten per cent.* from the long credit price is made to those who make a payment of one-fourth of the principal for cash. Never before have greater inducements been offered to cash purchasers.

EXAMPLE.

Forty acres at \$10 per acre on long credit, interest at six per cent., payable annually in advance; the principal in four, five, six, and seven years.

	INTEREST.	PRINCIPAL.
Cash payment.....	\$24.00	
Payment in one year.....	24.00	
" two years.....	24.00	
" three ".....	24.00	
" four ".....	18.00	\$100.00
" five ".....	12.00	100.00
" six ".....	6.00	100.00
" seven ".....		100.00

Full information on all points, together with maps, showing the exact location of the lands, will be furnished on application in person or by letter to

Wm. H. RANLETT, Architect.

Hohokus, Bergen County, N. J.

Prairie View Farm For Sale.

For sale, a beautiful farm of 160 acres, situated near the Fox River in the town of Oswego, Kendall Co., Illinois, $\frac{3}{4}$ miles from the station on the Chicago, Burlington and Quincy R. R., $\frac{3}{4}$ miles from the village of Oswego, and 6 miles from the city of Aurora. The improvements are all permanent and particularly well adapted to stock purposes. A well furnished house, and large barn with stabling for 50 cattle. A thrifty Apple orchard, Peach, Plum, Pear and Cherry trees, both dwarf and standard; also all the small fruits with a good variety of grapes, most of the above in bearing. A fine Durham stock, horses, tools and household furniture will be sold with the farm if desired. For further particulars address the subscriber at Oswego, Ill.

P. PORTER WIGGINS.

HEMP, FLAX AND TOBACCO.

Hemp and flax can be produced of as good quality as any grown in Europe. Tobacco of the finest quality is raised upon lands purchased of this Company, and it promises to be one of the most important crops of the State. Cotton, too, is raised, to a considerable extent, in the southern portion. The making of sugar from the beet is receiving considerable attention, and experiments upon a large scale have been made during the past season. The cultivation of sorghum is rapidly increasing, and there are numerous indications that ere many years Illinois will produce a large surplus of sugar and molasses for exportation.

FRUIT.

The central and southern parts of the State are peculiarly adapted to fruit raising; and peaches, pears and strawberries, together with early vegetables, are sent to Chicago, St. Louis and Cincinnati, as well as other markets, and always command a ready sale.

COAL AND MINERALS.

The immense coal deposits of Illinois are worked at different points near the Railroad, and the great resources of the State in iron, lead, zinc, limestone, potters' clay, &c., &c., as yet barely touched, will eventually be the source of great wealth.

TO ACTUAL SETTLERS

The inducements offered are so great that the Company has already sold 1,500,000 acres, and the sales during the past year have been to a larger number of purchasers than ever before. The advantages to a man of small means, settling in Illinois, where his children may grow up with all the benefits of education and the best of public schools, can hardly be over-estimated. No State in the Union is increasing more rapidly in population, which has trebled in ten years along the line of this Railroad.

PRICES AND TERMS OF PAYMENT.

The price of land varies from \$7 to \$12 and upward per acre, and they are sold on long credit, on short credit, or for cash. A deduction of *ten per cent.* from the long credit price is made to those who make a payment of one-fourth of the principal for cash. Never before have greater inducements been offered to cash purchasers.

EXAMPLE.

Forty acres at \$10 per acre on long credit, interest at six per cent., payable annually in advance; the principal in four, five, six, and seven years.

	INTEREST.	PRINCIPAL.
Cash payment.....	\$24.00	
Payment in one year.....	24.00	
" two years.....	24.00	
" three ".....	24.00	
" four ".....	18.00	\$100.00
" five ".....	12.00	100.00
" six ".....	6.00	100.00
" seven ".....		100.00

Full information on all points, together with maps, showing the exact location of the lands, will be furnished on application in person or by letter to

LAND COMMISSIONER,

Illinois Central R. R. Co., at Chicago, Ill.

MARYLAND FARMS.

We have for sale over 200 farms in this State, of as beautiful and productive land as ever the sun shone upon, having access by Rail Roads, Steamboats and Turnpikes. These Farms in many instances can be bought for less than the improvements upon them cost, in consequence of the change from slave to free labor.

As Surveyors we have an intimate knowledge of the lands of this State. Enquiries by letter will be promptly answered.

R. W. TEMPLEMAN & CO.

Real Estate Brokers, Baltimore City, Md.

FOR SALE.—Improved Farms.—One Farm 110 Acres, 18 miles from Philadelphia, 10 miles to Steamboat Landing, 1 mile to mari bed, fronting the R. R., $\frac{1}{4}$ mile to a station.—1 do. 70 acres, fronting a turnpike, extending to a lake 1 mile wide, all in grass, $\frac{1}{4}$ mile to a Rail Road station, 30 miles to Philadelphia.—1 do. 257 acres, 30 miles to Philadelphia, rich loam soil, \$20 per acre. Several small farms. J. H. COFFIN, Franklinville, Gloucester Co., New Jersey.

FISK & HATCH,

No. 38 Wall-st., New-York City.

BANKERS AND DEALERS IN

All kinds of Government and other Securities. Orders from the Country for purchase of Government Bonds, etc., attended to WITH CARE and Promptness.

7-30 U. S. Treasury Notes converted into U. S. 6 per cent. Bonds of 1881, on favorable terms.

Farmers, Countrymen, and Country Merchants

Can send their

Butter, Cheese, Eggs, Lard, Tallow, Beans, Hops, Flax, Cotton, Flour, Grain, Meal, Green and Dried Fruits, Furs, Skins, Poultry, Game, Provisions, Seeds, Sorghum, Wool, Potash, Tobacco, Oils, and other produce to

JOSIAH CARPENTER,

COMMISSION MERCHANT,

32 Jay-street, New-York.

To be sold at the highest market price. Every shipper to him will receive his valuable Weekly Price Current of the New York Market free

S. B. CONOVER,

Commission Dealer,

260, 261 & 262 West Washington Market,
FOOT OF FULTON-ST.

Particular attention paid to selling all kinds of Fruit and other Farm Produce. Letters to the Editor of the American Agriculturist.

CHARLES W. IDELL,

FRUIT AND GENERAL PRODUCE

COMMISSION MERCHANT,

70 & 71 Broad Avenue, West Washington Market, New-York.

Farmer's Produce of all kinds, Green, Dried and Canned Fruits, Maple Sugar and Syrup, Pork, Poultry, Butter, Eggs, Game, &c.

Particular attention paid to Fruit. Consignments solicited.

Sorghum Mills & Evaporators

Of the most approved manufacture for sale by the undersigned. The March, April and May numbers of "Rural Advertiser," containing specific instructions for sowing the seed, growth, management, and harvesting the cane, and also principles of the Evaporator used in manufacturing, forwarded by mail for 15 cts.

PASCHALL MOHRIS,

Agricultural and Seed Warehouse,

1120 Market-st., Philadelphia.

Agent for Mills and Evaporators.

Steel Composition Bells.

THE AMERICAN BELL COMPANY.

(Office No. 91 Liberty-street, New-York.)

Are the only manufacturers of this description of Bell, either in this country or in Europe—the combining of certain metals, and the process of manufacturing the same being the discovery of the President of the Company. These Bells we can commend with great confidence to the public, for their cheapness and quality of tone. We furnish a 500 lb. bell with all the necessary appointments—including Harrison's patented Self-acting Rotary, for \$125, and one of 1000 lb. with like appointments, for \$244, the price for the Bells being 20c. per pound, and that of the hangings containing full details, will be forwarded free of charge to all parties desiring the same.



of the first \$25, and those of the latter \$44. Our circulars containing full details, will be forwarded free of charge to all parties desiring the same.

Beardsley's Premium Hay Elevator.

Persons wishing to act as Agents for the sale of the BEST ELEVATOR in use, will please apply to

GRIFFING BROTHER & CO.

60 Courtland-st., New-York.

INGERSOLL'S IMPROVED

HORSE AND HAND POWER

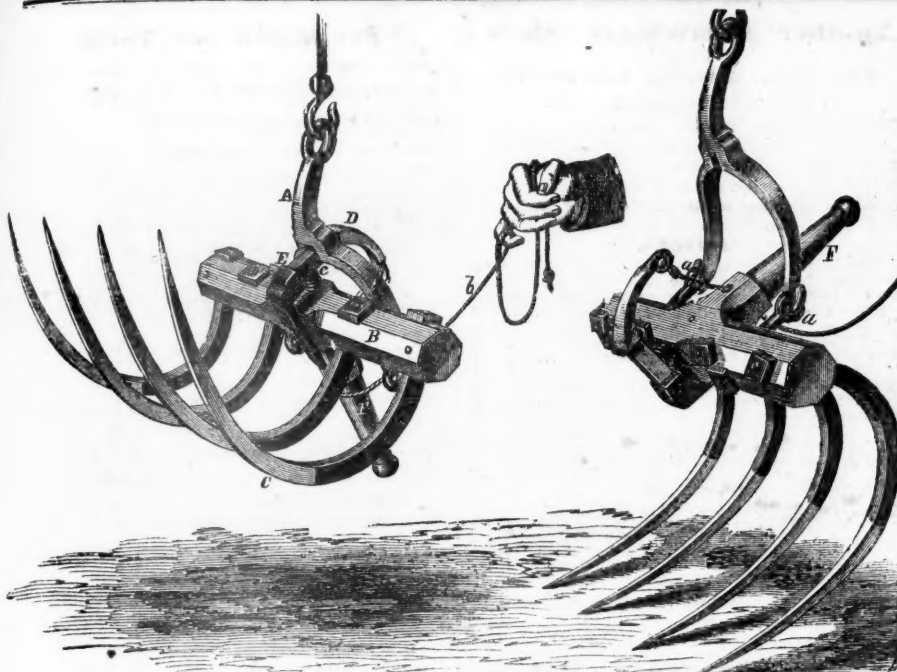
HAY AND COTTON PRESSES.

These machines have been tested in the most thorough manner throughout this and foreign countries to the number of over 1200.

THE HORSE POWER is worked by either wheel or capstan, and in many respects possesses unequalled advantages. We invite those wanting such machines to write for a catalogue containing full information with cuts, prices, &c., or call and examine personally.

Orders promptly attended to, by addressing

INGERSOLL & DOUGHERTY, Greenpoint, Kings Co., L. I.



FOR THE HARVEST OF 1864.

RUNDELL'S FIRST PREMIUM HAY ELEVATOR.

Every Farmer should have one of these labor-saving implements. It saves time, money, and hard work.

IT UNLOADS A TON OF HAY IN FROM 3 TO 8 MINUTES!

It pitches into a window from the outside, carrying the hay eight feet inside. It pitches into mows, over and under purlin beams, and into any place where a hand fork will work. It stacks Hay and Straw in the field, making high and long racks. Be sure and get the very best Fork, one that will not break and get out of repair. Do not buy an inferior article simply because it is cheap. Our Fork is not an untried experiment, but has stood the severest test during the past season, and received the highest commendations from those that have used them.

They are made in the most substantial manner so as to prevent all possibility of getting out of repair. Price of Fork and Pulleys, \$14.00. Circulars sent free. Persons sending us the price of the Fork, will receive the Fork free of expense. Orders for Forks in the State of New-York and the East, address R. J. RUNDELL & BRO., Hudson, N. Y., and all west of N. Y., address R. J. RUNDELL & BRO., Proprietors & Manufacturers, P. O. Box 3931 Chicago, Ill. Orders for Fork in the Counties of Westchester, Putnam, Dutchess, Columbia, Rensselaer, Washington, and Saratoga, N. Y., address GIFFORD BROS., Hudson, N. Y.

TO PLANTERS OF TREES, SHRUBS, AND VINES. PARSONS & CO.,

offer their fine stock of

**Apples, Plums, Cherries,
Pears—Standard, Pears—Dwarf,
Peaches on Plum Stock,**

and all other sorts of

FRUIT TREES

at very low rates.

HARDY GRAPE VINES,

OF

**Delaware, Hartford Prolific,
Concord, Iona,**

and many other sorts.

Vines for House Culture.

1 year, \$20 per 100—2 years, \$30 per 100.

These are of very fine quality.

They have at **Low Figures**, a very large stock from which to select handsome specimens, of

Street and Lawn Trees,

of symmetrical form and well rooted.

Flowering Shrubs in great variety.

Roses on their own roots, at from \$10 to \$25 per 100.

Exotic Plants for Window Gardens and Hanging Baskets, of the finest sorts.

They invite examination of their Grounds and Green-Houses.

For Catalogues apply by mail, at
Flushing, near New-York.

PATENT Indestructible Label for Fruit Trees, Flowering Shrubs, Roses, &c.

The attention of Amateur Fruit Growers and Nurserymen is invited to this useful article which has received the approval of many of the leading Horticulturists in the country. Their cheapness, durability and neatness of design render them essential in every well conducted Garden, Orchard, or Conservatory, in any climate, not being in any way affected by heat or dampness.

The cut, with a word or two of explanation, will render this useful invention perfectly clear to the reader. The edges of a circular zinc back, are turned over the edge of a mica front, between which the label, printed on paper, is placed, and shows through the mica in front of it as clearly as through glass. By the aid of a little cement, the whole is rendered impervious to water, and forms an indestructible, neat, and always legible label.

A sample label, with a list of the varieties constantly on hand, will be sent to any address in the Union on the receipt of two three cent postage stamps.

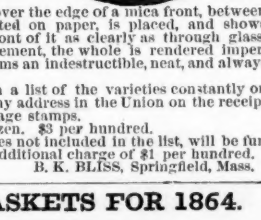
Price 50 cents per dozen. \$3 per hundred. The names of varieties not included in the list, will be furnished to order at an additional charge of \$1 per hundred. Address B. K. BLISS, Springfield, Mass.

FRUIT BASKETS FOR 1864.

To all interested in the picking, sale, and safe carriage of Small Fruits, we respectfully recommend our Improved Fruit Basket. If you want a basket to stand on its own bottom, ours will do it. If you want a basket to carry your fruit long distances with the least damage to the berry, we have it. If you want a basket that will hold your fruit to its most inviting and delicious appearance, we furnish it. Finally, if you want a basket in which is combined economy, strength and style; in short, entire completeness, we can give you satisfaction.

Circulars containing descriptions and prices of baskets and crates, will be sent, on application to us.

A. BEECHER & SONS, Westville, Conn.



Hot Water Furnaces

for Warming Green-houses, Conservatories, Graperies, &c.

WEATHERED & CHEREVOY, 117 Prince-st., New-York.

WEST'S IMPROVED PUMP.

By J. D. WEST & CO., 179 Broadway, N. Y.

GRAPES.

Although our stock of vines this season was very large it was by no means equal to the demand. We are now growing 250,000 vines, and invite early negotiations from parties wishing to purchase. We are already receiving heavy orders for fall delivery.

We will send our new catalogue, which will be issued in July, to all applicants enclosing stamp.

J. KNOX,
Box 153 Pittsburgh, Pa.

Newell & Stiles,

MANUFACTURERS OF ALL KINDS OF

Direction Labels or Tags.

The cheapest method of advertising, and the safest, most convenient, and durable article known for the use of Shippers and Nurserymen.

Agents wanted in every city in the Union. Send for Price List.

May 10th, 1864.

STRAWBERRIES.

Our Strawberries will be in perfection this season, about the 20th of June. We cordially invite persons interested in the cultivation of this delicious fruit, to visit our grounds then, and examine the different varieties for themselves. They will then have a better opportunity of judging of their merits, than in any other way.

We will issue our new catalogue in July, which will be sent to all applicants enclosing stamp.

J. KNOX,
Box 153, Pittsburgh, Pa.

TO FARMERS

AND OTHERS.

We are manufacturing a Genuine Article of VERY FINE BONE DUST, and RAW BONE SUPERPHOSPHATE OF LIME, manufactured from unburned Bones, containing all the Animal and Chemical Fertilizing Properties. Please address the Manufacturers, and get the Intrinsic Value of your money.

N. B. A Liberal Discount made to Dealers for Cash.
Address A. LISTER & BRO.,
Newark, N. J.

Rhodes Standard SUPERPHOSPHATE.

The following letter from the well-known agriculturist Dr. Loring, of Salem, Mass., is published for the benefit of farmers who may not have used "RHODES MANURE."

H. E. MORING, 113 Water-st., New-York.

N. B.—"RHODES" is sold by all respectable dealers through New-York and New-England.

Salem, Mass., April 19, 1864.

To H. E. MORING Esq.:

General Agent Rhodes Superphosphate,
113 Water-st., New-York.

Dear Sir,—I have used "Rhodes Superphosphate" on various crops, and in all cases have found it useful. Applied to Corn in the hill it is very valuable; and as a fertilizer for turnips, it is hardly equalled. It is certainly a most important, effective and economical manure.

Truly Yours,

GEO. B. LORING

AMMONIATED PACIFIC GUANO.

A real guano containing from seventy to eighty per cent of Phosphate of Lime, to which has been added, by a chemical process, a large percentage of Actual Ammonia so fixed that it can not evaporate, making it equal if not superior to any other fertilizer.

Pamphlets with copies of Analysis by Dr. Jackson, Mass. State Assayer, and testimonials from scientific Agriculturists showing its value, can be obtained from J. O. BAKER & CO., Selling agents, 81 Wall-st., New-York.

Bruce's Concentrated Manure.

Those who have used the above valuable fertilizer the past year, give it the preference over

No. 1 Peruvian Guano, Bone, or Poudrette. In the year 1862, some fifty tons were sold. Last year orders came in to the amount of four hundred tons, only half of which could be filled. This year we shall manufacture ONE THOUSAND TONS.

Its "component" parts are:

40 per cent. of Animal fibre and Blood.

40 per cent. of pure Ground Bones.

20 per cent. of Absorbents.

The absorbents are Charcoal and Gypsum.

Price \$45 Per Ton, packed in barrels 250 lbs. in each.

Send for Circular. Send your orders to
GRIFFING BROTHER & CO.
38 and 60 Courtlandt-st., New-York.

Contents for June, 1864.

Apples in Iowa.....	180
Barn-Plan—Reisig and Hexamer's.....	172
Barometer and Thermometer in April.....	168
Bars for Fences—Handy.....	169
Bees—Applary in June.....	163
Birds—Word for the Blue Jay.....	175
Bloodroot—Description.....	180
Boys' and Girls' Columns—The Insects and the Birds —About Great Men and Boys—How the Soldier Sleeps—Problems and Puzzles—Caught in a Sudden Shower—The Boys of New York City—Newsboys —Hint for the Unpunctual.....	183-184
Bread and some other Things.....	181
Bread and Yeast—Good.....	182
Cattle—Heavy Bullock, Pride of Livingston.....	174
Cattle—Mammoth Oxen at Metropolitan Fair.....	176
Chipmunk or Ground Squirrel.....	175
Chives or Slives—Description and Cultivation.....	180
Cooking Jelly—Raspberry Short-Cake—Pickled or Spiced Currants—Pudding Sauce—Cream Muffins —Fritters—Corn Starch Cake.....	182-183
Corn as Food for Stock.....	174
Corn—Late Planting.....	174
Corn—Selection for various Purposes.....	176
Endive—Description and Cultivation.....	178
Farm Work in June.....	161
Fish Manure—Fish Guano.....	173
Flower Gardening and Lawn in June.....	163
Flowers—How they become Double.....	5 Illustr.
Flowers—Preserving in Natural Form.....	180
Fodder—Good Plants for.....	170
Fruit Garden in June.....	164
Fruit Growers' Meetings—Notes from.....	163
Fruits—Best Way of Preserving.....	181
Garden Kitchen in June.....	162
Good Man's Wish.....	169
Grape Culture—Notes and Queries.....	179
Grape Vines—Pinching the Laterals.....	179
Grapery—Cold in June.....	163
Grass—Sweet Scented Vernal.....	170
Green and Hot-Houses in June.....	163
Hay—Conflicting Views on Stirling.....	174
Hay Field—Labors in.....	169
Hoes and How to Use Them.....	171
Horses—Notes on Breeding.....	174
Humbug—The "Religious Dodge".....	182
Manure—Home-Made Poudrette.....	173
Manure Spreading Implement.....	171
Market Review.....	185
Mowers—Which is Best?.....	168
Music at Home.....	182
Nickels—What becomes of Them?.....	170
Notes and Suggestions for June.....	161
Orchard and Nursery in June.....	162
Oxen—Use of in Horse Powers.....	171
Painting—Hints on.....	181
Plants—Internal Structure of.....	5 Illustrations
Platters—How to Anneal.....	182
Roots—Cultivation for Feeding.....	170
Rose Bush—Long Sleep of.....	180
Sheep—Care of in June.....	175
Sheep—Word from an Old Sheep Raiser.....	174
Sweet Potatoes at the North.....	178
Swine—What to do with Pigs.....	175
Tobacco Field—Practical Suggestions.....	171
Tomatoes—How to Train.....	178
Transplanting and Transplanters.....	2 Illustrations
Trees—Virginia Fringe Tree.....	179
Watering Newly Set Plants and Trees.....	178

INDEX TO "BASKET," OR SHORTER ARTICLES.

Almanac, National.....	165
Agriculture of Mass.....	165
Asparagus, Varieties.....	167
Barley, Italian.....	166
Bees in Houses.....	166
Bees, Italian Described.....	166
Black Knot on Plum.....	167
Book of Fruits.....	165
Borers, Scalding.....	167
Cabbages, Protecting.....	167
California Crops.....	166
Carrot Seed, Cleaning.....	167
Cattle in California.....	166
Chickens, Loss of.....	166
Chickens, Succor for.....	166
Colt, Weak Ankles.....	166
Correspondents, Note to.....	165
Cow with Sore Teats.....	166
Cut-worm a Climber.....	166
Daisies, Exterminating.....	167
Death of E. G. Faile.....	165
Dyeing Directions, etc.....	167
Eggs in Winter.....	166
Fall Pippin in Illinois.....	165
Farm Song Wanted.....	167
Fleas, Expelling.....	167
Fowls, Italian.....	167
Fruit-Jars, Bakers'.....	167
Gapes, Cure for.....	166
Gophers.....	166
Grass, Blue in Iowa.....	168
Heifers, Kicking.....	166
Hog, 1,600 lbs.....	166
Hogs, Chester White.....	166
Horse Management.....	167
Horse, Nervous.....	166
Horses Pulling Halters.....	166
Huckleberries, Culture.....	167
Hungarian Grass.....	166
Implements, Farm.....	166
Insects on Asters.....	165
Investment, Secure.....	165
Ivory from Horses.....	167
Lambs, Loss of.....	166
Lime, Oyster Shell.....	165
Live Stock Market.....	168
Manure, Chip, etc.....	165
Manure for Cabbages.....	165
Manure for Strawberries.....	165
Oats, "Mean Crop".....	166
Plants Named.....	165
Plows, Subsoil.....	166
Plums, Nebraska.....	167
Pumpkin Seeds, Med'n.....	167
Questions, Asking.....	165
Rat Remedy.....	166
Rifle, Spencer.....	165
Rifemen, Hints to.....	165
Rutabagas for Cattle.....	166
Scouring Knives.....	167
Scratches, Cure for.....	166
Seeds, Distributing.....	165
Sheep, Company for.....	166
Strawberry, Agric'tist.....	165
Strawberries, Everbear's.....	165
Strawberries, Showing.....	167
Strawberries, Seedling.....	165
Sunday School Book.....	165
Ten Acres Enough.....	168
Toilet Case, Brooks.....	165
Trees for Fuel.....	166
Trees Killed by Cold.....	167
Tree Labels.....	167
Trees, Nut-bearing.....	167
Vinegar Animals.....	167
Wind Power Saw.....	167
Wool, Great Yield.....	166

Communications Deferred.—Owing to the early day at which we go to press many communications come too late to be seasonable. Among those excluded this month is an excellent article on tree planting by Owego. Will our friends recollect that the work on the paper is always a full month in advance of the season?

Another Strawberry Show,

AT THE
Office of the American Agriculturist.

ON THE 15th AND 16th OF JUNE.

The Proprietor of the *American Agriculturist* again offers the use of his commodious establishment, 41 Park Row, for the Third Annual Exhibition of Strawberries. To add to the interest and to secure a careful and systematic examination of the merits of the berries, he takes pleasure in offering the following

PRIZES.

- A—For best 12 approved varieties (one quart each).....\$10
B—Second best.....do.....5
C—For best market berry (two quarts of one variety—It is desirable to show plants with fruit).....5
D—For second best.....do.....2
E—For heaviest three berries of one variety.....3
F—For best flavored Strawberry (one pint).....2
G—For best quart of White Strawberries.....2
H—For best Alpines—not less than one pint.....1
J—For the best New Seedling.....5
K—For the 2d best do.....3

[The berries shown as *new seedlings* must have been fruited two years and not previously made public by exhibition, sale, or otherwise. The entire plant, or at least fruit stalks with berries attached, and the leaves, must be shown.]

L—*Discretionary Premiums.*—The Committee will also award, at their discretion, 10 premiums of \$1 each, to meritorious samples not included above. 10

No sample can compete for more than one prize.

The berries to come in competition for the premiums must be upon the tables as early as 11 A. M. on the first day of exhibition, and each specimen must be correctly labeled and entered in the name of the *Producer*. The Awarding Committee will attend to their duties at 12 M.—When the premiums are awarded, the names, residence, and places of business of the exhibitors will be put upon the specimens, and the samples designated.—No Fruit exhibited will be removed before the evening of the 2nd day. After consultation with the principal Strawberry raisers of this vicinity,

The Time of the Exhibition

has been fixed for the 15th and 16th of June—two days. Should any change be found necessary, which is not probable, a notice to that effect will be found in the Daily Tribune and Daily Times of Wednesday, June 2d.

The Committee of Judges appointed at the "Fruit Growers' Meeting," May 12th, consists of the following well-known and respected amateurs.

P. B. MEADE ESQ., New-York, Chairman.
R. G. PARDEE ESQ., Brooklyn.
WINANS ESQ., New-York, N. J.
DR. J. B. CHAPIN, Providence, R. I.
PROF. HUNTSMAN, Flushing.

Strawberries for All Applicants.

When the special premium of the *Agriculturist* Strawberry was announced, promise was made, that they should be distributed to all as rapidly as the increase by propagation would allow, in the order in which subscribers' names were received. The severe drouth of last summer greatly retarded multiplying the plants, so that at one time it was doubtful whether enough could be obtained to supply the unprecedented large number of subscribers the present year. But the favorable season this spring enables us to announce that there will be plenty for all comers, up to the 100,000 subscribers that we have already nearly registered on our books.—(A little effort on the part of our friends this month will complete the number.) We give this repetition of the above notice, in answer to numerous letters of inquiry, from those who have not seen previous announcements.

Gratifying to All Parties.

Numerous letters from advertisers and from readers testify to their appreciation of the value of the advertising columns of the *American Agriculturist*. One writes, "It is most satisfactory to feel assured when looking over your business cards, that one shall stumble into no trap set to catch the eye and then the dollars of the unwary. Stick to your card 'No Humbugs admitted.'—Another; 'We are constantly hearing from our advertisement in the *American Agriculturist*, and have already been repaid fourfold for the money expended. We are enabled to trace the source of our orders, by the very excellent arrangement requested by you, that parties shall mention in their letters, where they saw our advertisement." Notwithstanding that the busy season with Nurserymen, Agricultural warehouses, and others is mainly passed, our columns are yet well filled with valuable information to purchasers. Those in other lines of business are discovering that by this means a widely extended and reliable class of customers is most certainly reached.

Premiums for 1864.

Or Pay to Voluntary Agents who attend to Collecting and forwarding Clubs of Subscribers to the *Agriculturist*.

Table of Premiums and Terms.

Open to all—No Competition.

Names of Premium Articles.

Good Books—See terms below	Price of each	Amount at 1st cash	Amount at 2nd cash
A—American Cyclopaedia (Appleton's New).....	\$64 00	150	286
B—Best Family Clothes Wringer.....	\$7 00	19	45
C—Nonpareil Washing Machine.....	\$16 00	40	60
D—Sewing Machine, (Wheeler & Wilson).....	\$50 00	110	225
E—Sewing Machine, (Wilcox & Gibbs).....	\$45 00	98	195
F—Woodruff's Mercurial Barometer.....	\$10 00	25	50
G—Woodruff's Mercurial Barometer.....	\$15 00	35	70
H—The Aquarius.....	\$12 00	30	60
I—Five Octave Melodeon (best).....	\$80 00	190	320
J—Four Octave Melodeon (best).....	\$60 00	130	250
K—Seven back Volumes <i>Agriculturist</i> ,.....	\$8 68	28	64
L—Six do do do.....	\$7 44	25	58
M—Five do do do.....	\$6 30	22	49
N—Four do do do.....	\$4 96	19	42
O—Three do do do.....	\$3 72	16	38
P—Two do do do.....	\$2 48	13	24
Q—One do do do.....	\$1 24	10	13
R—Jacob's Portfolio Paper File.....	\$1 50	11	17
S—Osborn & Hodgkinson's Paints.....	\$1 50	11	17
T—Premium Cylinder Plow No. 1.....	\$12 00	45	110
U—Eagle Plow No. 20, with coulter.....	\$11 00	40	100
V—Hay and Straw Cutter (best), No. 1.....	\$10 00	35	90
W—Steel-tooth Cultivator (best).....	\$10 00	35	90
X—Family Lard and Wine Press, No. 2.....	\$8 00	30	70
aa—Case of Drawing Instruments.....	\$6 50	25	55

No charge is made for packing or boxing any of the articles in this Premium List. The books, and the Premiums K, to S, inclusive, are DELIVERED to any part of the United States and Territories, free of all charges. The other articles cost the recipient only the freight after leaving the manufactory of each. Every article offered is new and of the very best manufacture.

* The book premiums are to be selected from list on page 187, to the amount of 10 cents for each subscriber sent in clubs at 80 cents; or to the amount of 30 cents for each name at \$1 a year. But no book premiums are given, where the club does not number at least 15 names. Books mailed post-paid.

N. B.—The varying cost of books and other articles, requires some changes in the above premium terms, from month to month. The terms, therefore, hold good only for the particular month in which they are published.

Note about Premiums.—Our friends will please look at the premium list as now published.—Several of the articles have advanced in price to such an extent that we are unable to offer them on the same terms as heretofore—as we shall have to pay the increased cost on the articles noted, from this date.

Back Volumes & Numbers Supplied.

We have complete sets of Vols. 16, 17, 18, 19, 20, 21, 22, both unbound, and bound in neat covers with gilt lettered backs. Prices at the office: bound \$1.50, unbound \$1.00 each. Back Volumes are sent prepaid by mail, (they can not go unpaid) if bound, \$2.00 each; if unbound; \$1.24 each. Single numbers of any of the above Volumes, 10 cents each.

Binding.—Sets sent to the office will be bound up neatly (in our regular style of binding) for 50 cents a volume.

CLUBS can at any time be increased, by remitting for each addition the price paid by the original members, if the subscriptions all date at the same starting point. The back numbers will of course be sent to added names.

American Agriculturist.

For the Farm, Garden, and Household.

A THOROUGH-GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; care of DOMESTIC ANIMALS, etc., and to HOUSEHOLD LABORS, with an interesting, instructive department for CHILDREN and YOUTH.

The Editors are all PRACTICAL WORKING MEN.

The teachings of the *AGRICULTURIST* are confined to no State or Territory, but are adapted to all sections of the country—it is for the whole AMERICAN CONTINENT.

TERMS—INVARIABLY IN ADVANCE.

(For either the English or German Edition.)

One copy, one year.....(always in advance).....\$1 00
Six copies, one year.....(do.).....5 00
Ten or more copies one year.....(do.).....80 cents each.

Add to the above rates: Postage to Canada, 12 cents; to England and France, 24 cents; to Germany, 36 cents. Postage anywhere in the United States and Territories must be paid by the subscriber, and is only three cents a quarter, if paid in advance at the office where it is received. Address all communications to the Editor and Proprietor,

ORANGE JUDD, 41 Park-Row, New-York City.